

ANNOUNCEMENTS

THE UNIVERSITY OF CHICAGO

VOLUME XXXIII

JULY 10, 1933

NUMBER 14

THE MEDICAL SCHOOLS NUMBER



FOR THE SESSIONS OF
1933-34

CALENDAR FOR THE YEAR 1933-34

1933

June 10	Saturday	Alumni Day
June 11	Sunday	Convocation Sunday
June 12	Monday	College Day
June 13	Tuesday	Summer Convocation
June 14	Wednesday	Spring Quarter ends
June 17	Saturday	Registration for the Summer Quarter
June 19	Monday	<i>Summer Quarter begins</i>
June 19-24		Examinations of the College Entrance Examination Board
July 4	Tuesday	Independence Day: a holiday
July 21	Friday	First Term of the Summer Quarter ends
July 24	Monday	Second Term of the Summer Quarter begins
Aug. 20	Sunday	Convocation Sunday
Aug. 22, 23		Entrance Examinations
Aug. 25	Friday	{ Autumn Convocation { Summer Quarter ends
Sept. 25-29		Freshman Week
Sept. 30	Saturday	{ Registration for the Autumn Quarter in all schools and colleges
Oct. 2	Monday	{
Oct. 3	Tuesday	<i>Autumn Quarter begins—all classes meet</i>
Nov. 30	Thursday	Thanksgiving Day: a holiday
Dec. 5-6		Entrance Examinations
Dec. 17	Sunday	Convocation Sunday
Dec. 19	Tuesday	Winter Convocation
Dec. 22	Friday	Autumn Quarter ends

1934

Jan. 2	Tuesday	<i>Winter Quarter begins—all classes meet</i>
Feb. 12	Monday	Lincoln's Birthday: a holiday
Feb. 22	Thursday	Washington's Birthday: a holiday
Mar. 6, 7		Entrance Examinations
Mar. 18	Sunday	Convocation Sunday
Mar. 20	Tuesday	Spring Convocation
Mar. 23	Friday	Winter Quarter ends
Mar. 24-Apr. 1		Quarterly Recess
Apr. 2	Monday	<i>Spring Quarter begins</i>
May 30	Wednesday	Memorial Day: a holiday
June 9	Saturday	Alumni Day
June 10	Sunday	Convocation Sunday
June 11	Monday	College Day
June 12	Tuesday	Summer Convocation
June 13	Wednesday	Spring Quarter ends

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FOUNDED BY JOHN D. ROCKEFELLER

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GENERAL STATEMENT

INTRODUCTION

The Medical Schools of the University include (1) The School of Medicine of the Division of the Biological Sciences, and (2) Rush Medical College.

The School of Medicine of the Division of the Biological Sciences was organized in 1924. Its purpose is to serve the Medical Sciences by research and teaching. It is a part of the Division of the Biological Sciences and its work is done on the University Quadrangles in close contact with that of other scientific departments—Physics, Chemistry, Zoölogy, etc. Departments devoted to the pre-clinical sciences were provided for when the University was founded, and established shortly thereafter. Their primary purposes are the development of the sciences and the training of scientists. Since 1899 they have included among the courses offered all those required in the first two years of work leading to the degree of Doctor of Medicine as well as those leading to the degrees of Bachelor of Science, Master of Science, and Doctor of Philosophy. In 1924 and 1925 clinics and departments devoted to the clinical medical sciences were added with the same general character and purpose as the departments previously established. Since then the School of Medicine of the Division of Biological Sciences with its hospitals and clinics has offered opportunity for training and study in clinical medicine. In the medical course leading to the M.D. degree emphasis is placed on practical clinical training. Clinical teaching is through supervised doing. In addition, opportunity is afforded in each department for elective courses and for advanced intensive work and research leading to advanced degrees.

Rush Medical College is devoted to the clinical medical sciences. This College is situated on the West Side of Chicago in connection with the Presbyterian Hospital, the medical service of which is supplied by the College Faculty. Among the courses offered are all those of the third and fourth years required for the degree of Doctor of Medicine as well as elective courses in all departments.

HISTORY OF RUSH MEDICAL COLLEGE

Rush Medical College was chartered by a special act of the legislature of the state of Illinois in 1837. It was founded by Daniel Brainerd, its first President. The first course of lectures was delivered in the second story of a frame building on Clark Street, near Randolph, in 1843. In 1844 a college building was erected at the corner of Dearborn Avenue and Indiana Street (now Grand Avenue). In 1867 a larger building was erected on the site of the old one. This edifice was destroyed in the great fire of 1871 and for three years the College occupied a temporary amphitheater on the ground of the Cook County Hospital, then located at Arnold and Eighteenth streets. In 1875 a Clinical Building was erected at the corner of Wood and Harrison streets, and in 1893 a Laboratory Building was erected on the south side of Harrison Street, opposite the Clinical Building. The Senn Building, adjoining the Clinical Building on the east, was erected in 1903. In 1887 the College became the medical department of Lake Forest University, retaining, however, its autonomy. This relation was dissolved by mutual consent in April, 1898, and in the same month affiliation with the University of Chicago was established. In 1883 the Presbyterian Hospital, adjoining the College, was established in affiliation with Rush Medical College. In May, 1924, a new contract was executed

between the corporation of Rush Medical College and the University of Chicago in accordance with which the affiliation of 1898 was superseded and the University took over the work of Rush Medical College as a department of the University. This contract went into effect June 16, 1924. The old Clinical Building was removed in 1924, and has been replaced by the Rawson Clinical Laboratory and the Norman Bridge Laboratories of Pathology.

All candidates for the degree of Doctor of Medicine in the University do the work of the first two years in the School of Medicine of the Division of the Biological Sciences on the Quadrangles. The work of the third and fourth years may be done either in the School of Medicine on the Quadrangles or in Rush Medical College at 1758 West Harrison Street.

A fifth year devoted to an internship or to advanced medical work is required for the M.D. degree.

GENERAL REGULATIONS OF THE MEDICAL SCHOOLS

1. *Changes in rules and regulations.*—The right is reserved by the University to make changes at any time in requirements for admission, curriculum, fees, or any rules and regulations, and to refuse further registration to a student whom his instructors believe to be incompetent in scholarship or otherwise unfit to continue his course.

2. *Physical and medical examination.*—Every medical student must report at the office of the Health Service for physical and medical examination during the first two weeks of his residence in the Medical School. Each student must show evidence of satisfactory vaccination against smallpox. The University seeks to maintain the best possible sanitary and hygienic conditions in the matter of (1) purity of water and food supply, (2) sanitary conditions of all buildings and rooms used in any way by students, (3) preventing the entrance and spread of contagious diseases, (4) restraining students from undertaking work for which they are physically unfit. The co-operation of all students is requested in carrying out this purpose.

On the Quadrangles the University Health Service has offices in the University Clinics. Students are urged to make use of the service to the fullest extent. Its object is not only treatment but also prevention of disease and its detection in the earliest stages. Persons paying more than one-half of the full tuition will not be charged for ordinary care at the Health Service offices, or for board and room in the hospital for the first three days of any illness. In the case of students paying one-half of the full tuition or less, the service will be limited to ambulatory care which can be rendered by the Health Service Staff. Hospitalization and visits to other clinics are not provided for members of this group.

For major and elective operations, hospitalization for elective operations, special nurses, private rooms, refractions, X-rays, and special, expensive dressings and appliances, there will be a charge adapted, as far as possible, to the student's ability to pay.

In Rush Medical College a Health Service on the plan of voluntary health insurance is administered through the office of the Dean. Health examinations are required.

3. *The University year.*—The University year is divided into four quarters of about twelve weeks each. The Autumn, Winter, and Spring Quarters begin about the first of October, January, and April, respectively, and the Summer Quarter immediately after the close of the Spring Quarter. The Summer Quarter is divided into two equal terms. At the close of the Autumn and Winter Quarters there is a recess. At the close

of the Spring Quarter there is no recess. At the close of the Summer Quarter there is a recess of about four weeks. Medical students should commence the medical curriculum in the Autumn Quarter in order to pursue the initial medical courses in proper sequence.

4. *Attendance of undergraduates.*—It is expected that students will regard an engagement with an instructor or other University appointment as they regard any other engagement and that the customary rules of courtesy will be observed.

ADMISSION

First- and second-year classes are limited to 100 in each class; the third- and fourth-year classes are limited to 50 in the Divisional School and to 140 in Rush Medical College.

Students begin the medical work in the Autumn Quarter. The Committees on Admission meet regularly in May of each year to consider admission. Applications for admission should be submitted in April or earlier. The Committees select from among the applicants students who can be admitted on a basis of scholarship and the possession of other qualifications judged necessary or desirable in the study and practice of medicine. Among these is ability to devote full time and energy to medical work without outside work for self-support.

I. REQUIREMENTS FOR ADMISSION TO THE MEDICAL SCHOOLS

1. Admission to the Division of the Biological Sciences. Two years of college work devoted to general education, including studies in the social sciences and the humanities in addition to the physical and biological sciences.
2. Adequate training in Physics, Chemistry, Biology, and Mathematics. It is recommended that this include:
In Chemistry—Quantitative Analysis and Organic Chemistry.
In Physics—Mechanics, Electricity, Heat, Light, and Sound.
In Mathematics—Trigonometry or Elementary Mathematical Analysis.
In Biology—Vertebrate Zoölogy, Physiology, and Embryology. The adequacy of preparation for medicine in these fields may be tested by a comprehensive examination.
3. A reading knowledge of German or French. After 1933 German is required.

This preparation required under 2 and 3 will ordinarily be completed by the end of the first year in the Division, that is, the end of the third year of college or university work.

4. Selection by the Committees on Admissions based on character, aptitude, and scholarship. Evidence of interest and ability in research will commend applicants to the Committees on Admissions.

II. SUGGESTIONS REGARDING COLLEGE PREPARATION FOR MEDICINE

The study and practice of medicine is so wide a field that it offers opportunity for exercise of many different kinds of special training and ability. Understanding of the organization of society, of its machinery and history, and skill in communication with others, are desirable. Some of the lines along which training may well be sought in the

university are: the use of the English language, physics, psychology, physical chemistry, advanced biology, elements of the structure and physiology of plants, advanced mathematics, history, economics, sociology, Latin, Greek, drawing.

The Council on Education of the American Medical Association has made some suggestions regarding individual subjects to be included in college work preparatory for medicine. These have been adopted by many state boards of medical licensure and required. The state boards require only two years (or sixty semester hours) of college work, and students completing three or four years of work in the university will go far beyond these suggestions in some or all lines. Their recommendations follow:

a) Chemistry.—*Twelve semester hours required of which at least eight semester hours must be in general inorganic chemistry, including four semester hours of laboratory work and four semester hours in organic chemistry, including two semester hours of laboratory work. In the interpretation of this rule, work in qualitative analysis may be counted as general inorganic chemistry.*

b) Physics.—*Eight semester hours required, of which at least two must be laboratory work. It is urged that this course be preceded by a course in trigonometry.*

c) Biology.—*Eight semester hours required, of which four must consist of laboratory work. This requirement may be satisfied by a course of eight semester hours in either general biology or zoölogy, or by courses of four semester hours each in zoölogy and botany, but not by botany alone.*

d) English composition and literature.—*The usual introductory college course of six semester hours, or its equivalent, is required.*

e) Non-science subjects.—*Of the sixty semester hours required as the measurement of two years of college work, at least eighteen, including the six semester hours of English, should be in subjects other than the physical, chemical, or biologic sciences.*

f) Foreign language.—*A reading knowledge of a modern foreign language is strongly urged. French and German have the closest bearing on modern medical literature. If the reading knowledge in one of these languages is obtained on the basis of high-school work, the student is urged to take the other language in his college course. It is not considered advisable, however, to spend more than twelve of the required sixty semester hours on foreign languages.*

g) *This premedical course in both quantity and quality must be such as to make it acceptable as the equivalent of the first two years of the course in reputable, approved colleges of arts and sciences leading to the degree of Bachelor of Science.*

Licensing boards of the various states require evidence of the completion of certain preliminary education in advance of matriculation in a recognized medical school before candidates are admitted to examinations for license to practice. The requirements in any particular state may be ascertained in the office of the Dean of Students.

III. ADMISSION AS SPECIAL MEDICAL STUDENTS

Students not seeking a degree in this University may be admitted, through the office of the Director of Admissions, as unclassified students.

Registration of unclassified students in the medical courses is subject to the approval of the Dean of the School or College concerned. In the case of students coming from other medical schools, a statement from the Dean of good standing, a recommendation from the Dean for registration in the courses desired here, and an official transcript showing the satisfactory completion of courses prerequisite to those desired here are required.

IV. ADMISSION WITH ADVANCED STANDING IN THE MEDICAL COURSES

Students from other medical schools receive credit for work successfully completed in them, provided the Committee on Admissions judges it equivalent to the work required in the University of Chicago. They must have fulfilled the requirements for admission to the Medical Schools of this University.

Students from other schools applying for admission to the clinical work of the third year in Rush Medical College or in the School on the Quadrangles must present official transcripts showing in a manner satisfactory to the Committees on Admission the completion of the admission requirements and of medical work judged equivalent to that of the first two years in the Medical course of this School including Pathology 301 and 302; and must show satisfactory evidence of ability to read German (or French until 1933). In cases of doubt the applicant will be required to pass any or all of the general departmental examinations and the language examinations of the Medical schools of this University.

V. PROCEDURE FOR ADMISSION

A student seeking admission to the Medical Schools is requested to write to the Director of Admissions, The University of Chicago, Cobb Lecture Hall, Room 105, for an application blank which should be filled out fully and returned, together with an official itemized transcript of his college record, including a statement of his high-school record and a letter of honorable dismissal. The Director of Admissions will evaluate these credentials, and will notify the student and the appropriate Dean promptly if the requirements for admission are fulfilled. If the requirements are not fulfilled the student will be notified.

Students are not necessarily admitted even though their records meet the specific requirements. The Committee on Admission selects from among the applicants those who can be admitted on the basis of scholarship and the possession of other qualifications judged necessary or desirable for the study and practice of medicine.

MATRICULATION

Matriculation.—Each student matriculates on entering the University for the first time, but not for subsequent quarters. The matriculation fee of the University is \$20.00. The University Bursar has a representative at Rush Medical College.

REGISTRATION

1. Registration includes (1) the selection of courses of study, (2) the filing of the registration card, and (3) the payment of fees to the University Bursar. Courses are selected and the registration card issued in the office of the Dean of Students in the School or College.

2. Advanced courses may not be taken before prerequisite courses have been completed. With the approval of his Department, an instructor may make the completion of studies in related Departments a prerequisite for any course.

3. The Bursar issues receipts for the payment of University bills and certifies payment upon the student's registration card.

4. A student is not permitted to attend any course for which he is not registered.

5. Change of registration, without charge, is permitted up to the end of the second day of a quarter, if the consent of the Dean is obtained. After the second day, a fee of one dollar is paid to the Bursar for each change of registration, unless the initiative for the change comes from a University officer. If the change involves additional tuition, this must be paid.

CONTINUANCE

Continuance of students is subject to recommendations and conditions made by the Committee on Promotions. Students may be refused further registration in the medical courses if in the judgment of the Committee they are incompetent in scholarship or otherwise unfit to continue the course.

DEFICIENCIES IN MEDICAL COURSES

1. A student's work is *deficient* when either the quality or quantity of work done is unacceptable to the instructor. A qualitative deficiency is indicated by the grade reported. A quantitative deficiency is reported as "incomplete" with indication of the deficiency. The instructor may, at his option, reduce the grade or the amount of credit because of inadequate work throughout the quarter or excessive absence from whatever cause.

2. If a deficiency is not removed within the student's next quarter of residence, or if the student is not meanwhile in residence within twelve months of the time it was incurred, the student must repeat the course to receive credit. A course lacking final examination may be completed, with the consent of the Dean and the instructor, by passing either (1) a special examination administered through the office of the Home-Study Department (fee \$2.50) or (2) the regular class examination at the end of the student's next quarter of residence, provided the course is again offered in that quarter. Any incomplete course must be completed to the satisfaction of the instructor.

GRADUATION

Work in the Medical Schools of the University may lead to:¹

1. The Four-Year Certificate.
2. The degree of Doctor of Medicine.
3. The degree of Doctor of Medicine with Honors.
4. The degree of Master of Science.
5. The degree of Doctor of Philosophy.

Recommendation for any of these awards is conditional upon the maintenance of unexceptionable conduct while a student in the University.

1. *The Four-Year Certificate*.—This certificate, which qualifies the holder for service as interne in a hospital, is awarded after twelve quarters of satisfactory full-time work in a medical school approved by the University. The work of the last three quarters must have been done in the University of Chicago. (Certain state boards require that forty or more months elapse between entrance to a medical school and the award of this certificate.)

¹ *The degree of Bachelor of Science*.—Students who enter the Medical Schools after three years of university or college education may if they so desire qualify for this degree while in the Medical Schools in accordance with requirements stated in the *Announcements* of Arts, Literature, and Science.

2. *The degree of Doctor of Medicine.*—This degree is awarded when, in addition to meeting the requirements for the Four-Year Certificate, the student has also served a satisfactory twelve months' internship in an approved hospital, or has done three quarters of satisfactory full-time advanced work in some of the departments associated in medical work. (At least a minimum training in research is a very important element in medical education.)

3. *The degree of Doctor of Medicine with Honors.*—This degree is awarded when the student in addition to meeting with distinction the minimum requirements for the M.D. degree has also done independent research work and prepared a thesis constituting an actual contribution to knowledge. Honors are awarded in one department, on the recommendation of that department approved by the Faculty.

4 and 5. *The Degrees of Master of Science and Doctor of Philosophy.*—Statement of the conditions under which these degrees are awarded appears in the *Announcements of Arts, Literature, and Science.*

Postgraduate medical work.—Special advanced work may be undertaken by candidates holding the M.D. degree. (See page 14.)

PROGRAMS OF WORK

I. THE FIRST TWO (PRECLINICAL) YEARS

The work of the first two (preclinical) years is offered only in the School of Medicine of the Division of the Biological Sciences. Eighteen courses are required, approximately two-thirds of them devoted to a basic medical program required of all medical students. (See page 12.) Advanced courses may be substituted for those in the basic program subject to the approval of instructors. One-third of the eighteen courses are elective. Elective courses may be taken in any field connected with medicine subject to approval by the Dean of Medical Students. At the end of the second year, four departmental examinations are given, *Anatomy*, including Embryology, Histology, Neurology, and Gross Anatomy; *Physiology*; *Physiological Chemistry and Pharmacology*; *Hygiene and Bacteriology*. The scope of these examinations corresponds to the content of the courses in the basic program.

Students may not register in the clinical courses until these departmental examinations are passed. The departmental examination in Pathology is deferred to the end of the third year, although at least two courses in Pathology are required in the second year. Conjoint Clinical Course 301 is required before registration for clinical work in the University Hospitals, but not before registration in Rush Medical College.

II. THE THIRD AND FOURTH (CLINICAL) YEARS

The work of the third and fourth (clinical) years is offered in the Division of the Biological Sciences on the Quadrangles, and in Rush Medical College on West Harrison Street.

(a) ON THE QUADRANGLES

At least six quarters and eighteen courses are required in clinical work. Approximately two-thirds of the eighteen courses are devoted to a basic clinical program outlined on page 13. Approximately one-third are elective. Elective courses may be taken in any field connected with Medicine—clinical or preclinical, subject to approval by the Dean of Medical Students. They may be devoted to research (see item 3, this page, M.D. degree with honors).

Five of the six quarters are devoted to externships as indicated in the table on page 13. Throughout these quarters the students are part of the hospital organization with definite responsibilities toward patients. Training and instruction are largely by supervised doing.

Throughout the third year students serve as hospital externs, a quarter each in Medicine and Surgery, and a term each in Obstetrics-Gynecology and Pediatrics. Conjoint Clinical Course 302, continuing throughout the year, is included in these externships. The departmental examination in Pathology is given at the end of the third year. Its scope corresponds to the content of courses 301, 302, and the Pathologic work in the hospital externships.

During the fourth year two quarters are devoted to externships in the out-patient department, one in medicine (course 323) and one in Surgery (courses 304, 311, and 321). Out-patient work in Obstetrics-Gynecology and in Pediatrics is elective. Conjoint Clinical Course 350, continuing throughout the year, is part of these externships. Except for Course 350, one quarter in the fourth year is given over entirely to elective work. Departmental examinations are given during the last quarter of the fourth year in *Medicine*, in *Obstetrics-Gynecology*, in *Pediatrics* and in *Surgery*. The scope of these examinations corresponds to the content of the basic clinical course, including Conjoint Clinical Courses 301, 302, and 350, Pediatrics 305, and Obstetrics-Gynecology 305.

Courses are offered during the Summer Quarter as in other quarters, and the externships are available in September.

(b) IN RUSH MEDICAL COLLEGE

Requirements:

Seven courses in Medicine, including nervous and mental diseases, materia medica, therapeutics, jurisprudence, and toxicology; 1 course in Pediatrics; 5 courses in Surgery; 3 courses in Obstetrics and Gynecology; 1 course in Otolaryngology; .8 course in Ophthalmology; 1 course in Dermatology; 1.2 courses in Pathology; and 2 courses elected, subject to the approval of the Dean, in any clinical departments. (NOTE.—22 courses in Rush are equivalent to 18 on the Quadrangles. During the current year these departmental requirements will be rearranged on a basis of 18 courses in conformity with the arrangement on the University Quadrangles.) The student must pass the departmental examinations in each of the departments and subjects.

Work satisfactorily completed in the clinical courses of either of these schools is recognized in full in the other. Students are strongly advised not to undertake work in both schools during any one quarter. Transfer for any quarter from one division to the other must be arranged with the Dean well in advance, and when both are full will necessarily be by exchange of students.

III. THE FIFTH YEAR

In addition to the requirements for the Four-Year Certificate, a fifth year is required for the award of the M.D. degree. This may be devoted either to internship in an approved hospital or to advanced work in any of the departments associated in the work of the medical schools. An approved twelve months' internship is required for admission to examination for license to practice in Illinois, by 17 other states, and by the National Board of Medical Examiners.

If the fifth year is devoted to advanced work in a medical department beyond the minimum required in the programs listed above, the student must register for at least

PROGRAM OF THE BASIC MEDICAL COURSE

A. FIRST AND SECOND YEARS

FIRST YEAR

	Monday	Tuesday	Wednesday	Thursday	Friday
<i>Autumn</i>					
8:00	P. Chem.	P. Chem.	P. Chem.		P. Chem. A
9:00	Hist.	Hist.	Dis. A and B	Hist.	Dis. B. P. Chem. A
10:00	Hist.	Hist.	Dis. A and B	Hist.	Dis. B. P. Chem. A
11:00		Dis.	Dis. A and B	Hist.	Dis. B. P. Chem. A
1:30		Dis. A and B			Dis. A. P. Chem. B
2:30		Dis. A and B			Dis. A. P. Chem. B
3:30		Dis. A and B			Dis. A. P. Chem. B
4:30					P. Chem. B.
<i>Winter</i>					
8:00	P. Chem.	P. Chem.	P. Chem.		P. Chem. A
9:00	Neur.	Neur.	Neur.	Dis.	P. Chem. A
10:00	Neur.	Neur.	Neur.	Dis.	P. Chem. A
11:00		Dis.	Neur.	Dis.	P. Chem. A
1:30		Dis.			P. Chem. B
2:30		Dis.			P. Chem. B
3:30		Dis.			P. Chem. B
4:30					P. Chem. B
<i>Spring</i>					
8:00	Physiol.	Physiol.	Physiol.	Phys. A	Phys. A Dis. A
9:00	Bact.	Bact.	Bact.	Phys. A	Phys. A Dis. A
10:00	Bact.	Bact.	Bact.	Phys. A	Phys. A Dis. A
11:00	Bact.	Dis.	Bact.		
1:30		Dis. A and B		Phys. B	Phys. B Dis. B
2:30		Dis. A and B		Phys. B	Phys. B Dis. B
3:30		Dis. A and B		Phys. B	Phys. B Dis. B

SECOND YEAR

<i>Autumn</i>					
8:00	Physiol.	Physiol.	Physiol.	Path.	
9:00	Path.	Path.	Path.	Phys. A	Phys. A
10:00	Path.	Path.	Path.	Phys. A	Phys. A
11:00				Phys. B	Phys. B
1:30				Phys. B	Phys. B
2:30				Phys. B	Phys. B
3:30				Phys. B	Phys. B
<i>Winter</i>					
8:00					
9:00	Path.	Path.	Path.	Par.	
10:00	Path.	Path.	Path.	Par.	
11:00	P. Hlt.	P. Hlt.	Path.	Par.	Par.
1:30					
2:30					
3:30					
<i>Spring</i>					
8:00	Pharm.	Pharm. A	Pharm.	Pharm.	Pharm. A
9:00	C. Clin.	C. Clin. A	C. Clin.	C. Clin.	Phar. A. C. Clin. A
10:00	C. Clin.	C. Clin. A	C. Clin.	C. Clin.	Phar. A. C. Clin. A
11:00	C. Clin.	C. Clin. A	C. Clin.	C. Clin.	Phar. A. C. Clin. A
1:30		C. Clin. B			Phar. B. C. Clin. B
2:30		C. Clin. B			Phar. B. C. Clin. B
3:30		C. Clin. B			Phar. B. C. Clin. B
4:30					Phar. B.

NOTE: In the sixth quarter the last 3 weeks are given up to departmental examinations. Classes meet during 8 weeks only. Pharmacology has an extra laboratory period on Thursdays during the 6th, 7th, and 8th weeks. The total number of the courses above listed is 13. Five courses should be elected in addition. Any student in any quarter paying the normal fee may register for electives without additional charge.

B. THIRD AND FOURTH YEARS

THIRD YEAR

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<i>Autumn</i>						
8:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
9:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
10:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
11:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
12:00	C.C. 302	C.C. 302	C.C. 302	C.C. 302	C.C. 302	C.C. 302
1:30	Ext. Gr. A	Ext. Gr. B	Ext. Gr. A	Ext. Gr. B	Extern.	
2:30	Gr. B Free	Gr. A Free	Gr. B Free	Gr. A Free	Extern.	
3:30	Gr. B Free	Gr. A Free	Gr. B Free	Gr. A Free	Extern.	
4:30	Path.	Path.			Path.	
<i>Winter</i>						
8:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
9:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
10:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
11:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
12:00	C.C. 302	C.C. 302	C.C. 302	C.C. 302	C.C. 302	C.C. 302
1:30	Ext. Gr. A	Ext. Gr. B	Ext. Gr. A	Ext. Gr. B	Extern.	
2:30	Gr. B Free	Gr. A Free	Gr. B Free	Gr. A Free	Extern.	
3:30	Gr. B Free	Gr. A Free	Gr. B Free	Gr. A Free	Extern.	
4:30	Path.	Path.			Path.	
<i>Spring</i>						
8:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
9:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
10:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
11:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
12:00	C.C. 302	C.C. 302	C.C. 302	C.C. 302	C.C. 302	C.C. 302
1:30	Ext. Gr. A	Ext. Gr. B	Ext. Gr. A	Ext. Gr. B	Extern.	
2:30	Gr. B Free	Gr. A Free	Gr. B Free	Gr. A Free	Extern.	
3:30	Gr. B Free	Gr. A Free	Gr. B Free	Gr. A Free	Extern.	
4:30	Path.	Path.			Path.	

NOTE.—These are hospital externships in Medicine, Surgery, Obstetrics-Gynecology, and Pediatrics. One third of the class will necessarily be assigned to each externship. The work may be commenced in the Summer Quarter and continued through September. One-half the externs will be free M. and W. afternoons. The other half will be free Tu. and Th. afternoons. The externs in OB will not be free at all. Externships will be 2½ courses each, the free time ¼ course each quarter in the third year. The Pathology departmental examinations are given at the end of this year.

FOURTH YEAR

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<i>One Quarter</i>						
8:00	C.C. 350	C.C. 350	C.C. 350	C.C. 350	C.C. 350	C.C. 350
9:00	Med. 323	Med. 323	Med. 323	Med. 323	Med. 323	Med. 323
10:00	or	or	or	or	or	or
11:00	Sur. 311	Sur. 311	Sur. 311	Sur. 311	Sur. 311	Sur. 304
12:00	Sur. 321	Sur. 321	Sur. 321	Sur. 321	Sur. 321	
1:30	Gr. A Free	Gr. B Free	Gr. A Free	Gr. B Free	Med. 323	
2:30	Med. 323	Med. 323	Med. 323	Med. 323	or	
3:30	or	or	or	or	Sur. 304	
4:30	Sur. 304	Sur. 304	Sur. 304	Sur. 304	Path.	
<i>One Quarter</i>						
8:00	C.C. 350	C.C. 350	C.C. 350	C.C. 350	C.C. 350	C.C. 350
9:00	Med. 323	Med. 323	Med. 323	Med. 323	Med. 323	Med. 323
10:00	or	or	or	or	or	or
11:00	Sur. 311	Sur. 311	Sur. 311	Sur. 311	Sur. 311	Sur. 304
12:00	Sur. 321	Sur. 321	Sur. 321	Sur. 321	Sur. 321	
1:30	Gr. A Free	Gr. B Free	Gr. A Free	Gr. B Free	Med.	
2:30	Med.	Med.	Med.	Med.	or	Med.
3:30	or	or	or	or	Sur.	or
4:30	Sur.	Sur.	Sur.	Sur.	Path.	Sur.

One Quarter.—C. Clin. 350—8:00 to 9:00 A.M., Path. 4:50 Friday. Otherwise elective.

NOTE: One-third of the class will necessarily be assigned to each of the three quarterly programs.

three quarters of full-time work which must be reported satisfactory by the department. Such work must be done *after* the award of the four-year certificate. It may be credited not only toward the M.D. degree, but also toward a Master's or a Ph.D. degree. The fees are \$100 a quarter.

If the fifth year is devoted to an internship, the student must select a hospital approved by the Faculty and notify the Dean's Office within two weeks of entering upon the service. The Faculty will appoint a supervisor to whom the student must report and with whom he should discuss all questions relating to his work. At the end of the twelve months' period the supervisor reports to the Committee on Fifth Year which recommends to the Faculty the award of the M.D. degree if the interne's service has been satisfactory. Throughout this period the interne is regarded as a student in the University.

NOTE.—Admission to State Board Examinations for license to practice medicine is contingent in some states on the satisfactory completion of certain courses in the Medical School. Specific information concerning the requirements in any state may be obtained in the office of the Dean of Medical Students, or by writing the American Medical Association, 535 N. Dearborn Street, Chicago, for "Abstract of Laws and Board Rulings" (price sixty cents). The Illinois law governing license to practice in this state requires evidence that the minimum time between the commencement of the work of the Freshman year and the ending of the work of the Senior year, on which all students are required to be in attendance, shall be not less than forty months, and evidence of attendance on four full courses of lectures of at least nine months in four separate years. The Illinois law requires further that all applicants who graduated since July, 1923, must also have completed a course of training of not less than twelve months in a hospital approved by the Department of Registration and Education.

IV. POST-DOCTORATE MEDICAL WORK

Opportunities and facilities for post-doctorate work exist in many departments of the Medical Schools. Attention is invited to the conditions under which such work may lead to a Master's degree or to the Ph.D. degree as stated in the following departmental announcements. Programs of work leading toward specialization in the work of clinical departments or divisions of departments are already organized, or are in process of organization, and may be undertaken by suitably qualified Doctors of Medicine. Previous correspondence with, and acceptance by, the department concerned is required. All such students registered for University credit are required to pay the usual fees.

FEES

The matriculation fee is \$20.00 and is required when a student first enters the University. No further matriculation fee is required for transfer from one school, college, or division to another. The tuition fee in the Medical Schools is \$125.00 a quarter. The graduation fee is \$20.00. This is payable when any degree is awarded. No fee is required for the Four-Year Certificate. Fees for matriculation and registration are payable to the Bursar on or before the first day of each quarter. Registration is not complete till these fees are paid. Students who fail to meet this obligation within the first five days of the quarter are not members of the University. After the fifth day (second day in Rush Medical College) membership in the University is granted only with the special consent of the Dean and the payment of a fee of \$5.00 for late registration. (For special fees, see p. 100.)

Registration for less than a full program of work in any quarter with a proportionate reduction in fees, is permitted only when an explanation of the circumstances, written by the student on the form provided, is approved by the Dean of Students.

SCHOOL OF MEDICINE OF THE DIVISION
OF THE BIOLOGICAL SCIENCES

SCHOOL OF MEDICINE OF THE DIVISION OF BIOLOGICAL SCIENCES

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SION WOODSON HOLLEY, S.B., Assistant in Pathology.
HELEN HOWARD, Assistant in Medicine.

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- FREDERIC EASTLAND TEMPLETON, M.D., Assistant and Acting Resident in Roentgenology.
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- RUTH MAUDE WATTS, Ph.D., Research Assistant in Obstetrics and Gynecology, Douglas Smith Foundation.
- ROSS W. WEISGER, M.D., Assistant and Assistant Resident in Pediatrics.
- HARWELL WILSON, M.D., Research Assistant in Surgery, Douglas Smith Foundation.
- HYMAN WINTERS, S.B., M.D., Assistant and Assistant Resident in Pathology.

FELLOWS, 1933-34

- FRANK WILLIAM BAILEY, A.M., Fellow in Anatomy.
BRODA O. BARNES, PH.D., Seymour Coman Fellow in Physiology.
DAVID BODIAN, William H. Wilder, Jr., Fellowship in Anatomy.
NORRIS L. BROOKENS, S.B., Fellow in Physiology.
HUI CHUAN CHANG, M.D., Rockefeller Foundation Fellow in Anatomy.
NORMAN ROY COOPERMAN, S.M., Fellow in Physiology.
EUGENE DE SAVITSCH, A.B., Fellow in Physiology.
RALPH ISADORE DORFMAN, S.B., Fellow in Physiological Chemistry.
JOHN PERRIGO FOX, S.B., Fellow in Pathology.
ISIDORE GERSH, PH.D., Biological Foundation Fellow in Anatomy.
FRED LUDWIG HUMOLLER, S.B., Fellow in Physiological Chemistry.
ROBERT HENRY KREHBIEL, S.M., Fellow in Anatomy.
LUDWIG ROLAND KUHN, S.B., Fellow in Hygiene and Bacteriology.
ARNOLD LIEBERMAN, PH.D., M.D., Sandoz Fellow in Physiology.
CLAYTON G. LOOSLI, S.M., Biological Foundation Fellow in Anatomy.
FLOYD STEPHEN MARKHAM, S.B., Logan Fellow in Bacteriology.
FRANCIS JOSEPH MULLIN, S.M., Fellow in Physiology.
SAMUEL RAPER PENCE, JR., S.B., Fellow in Hygiene and Bacteriology.
TRUMAN SQUIRE POTTER, M.D., Seymour Coman Fellow in Preventive Medicine.
JAMES F. REGAN, PH.D., Donnelley Fellow in Physiology.
GERALD OLIN RULON, S.M., Fellow in Zoölogy.
WILLIAM LAWSON RUSSELL, A.B., Fellow in Zoölogy.
MILDRED SHAFFER, S.B., Fellow in Zoölogy.
LESLIE ALFRED STAUBER, S.M., Logan Fellow in Hygiene and Bacteriology.
PAUL E. STEINER, M.D., National Research Council Fellow in Pathology.
JOSEPH STRITAR, S.M., Logan Fellow in Hygiene and Bacteriology.
CHARLES FREDERIC SUTTON, S.M., Logan Fellow in Hygiene and Bacteriology.
JOHN J. WESTRA, PH.D., Donnelley Fellow in Physiology.
MOSES ZALESKY, S.B., Fellow in Zoölogy.

THE DEPARTMENTS

THE DEPARTMENT OF ANATOMY

OFFICERS OF INSTRUCTION

CHARLES JUDSON HERRICK, Chairman of the Department of Anatomy.

ROBERT RUSSELL BENSLEY, A.B., M.B., Sc.D., Professor Emeritus of Anatomy.

CHARLES JUDSON HERRICK, Ph.D., Sc.D., Professor of Neurology.

BASIL COLEMAN HYATT HARVEY, A.B., M.D., Professor of Anatomy.

PRESTON KYES, A.M., M.D., Sc.D., Professor of Preventive Medicine.

GEORGE WILLIAM BARTELMEZ, Ph.D., Professor of Anatomy.

CHARLES HENRY SWIFT, M.D., Ph.D., Associate Professor of Anatomy.

WILLIAM BLOOM, A.B., M.D., Associate Professor of Anatomy.

NORMAND HOERR, Ph.D., M.D., Instructor in Anatomy.

SYLVIA HOLTON BENSLEY, A.B., M.D., Instructor in Anatomy.

HAROLD B. KENTON, Ph.D., Instructor in Preventive Medicine.

ANTHONY AUGUSTUS PEARSON, JR., Ph.D., Instructor in Anatomy.

JEANNETTE B. OBENCHAIN, Ph.D., Research Associate in Anatomy.

CAROLINE MAY BENSLEY, S.B., Research Assistant in Anatomy.

FELLOWS, 1933-34

TRUMAN S. POTTER, M.D., Seymour Coman Fellow in Preventive Medicine.

ISIDORE GERSH, Ph.D., Biological Foundation Fellow in Anatomy.

CLAYTON G. LOOSLI, S.M., Biological Foundation Fellow in Anatomy.

DAVID BODIAN, William Wilder, Jr., Fellow in Neurology.

HUI CHUAN CHANG, M.B., Rockefeller Foundation Fellow.

FRANK WILLIAM BAILEY, A.M.

ROBERT HENRY KREHBIEL, S.M.

INTRODUCTORY

The Department of Anatomy is organized to provide for instruction and research in vertebrate anatomy, including human anatomy, histology, embryology, and neurology.

Students of medicine and other students desiring to study anatomy are strongly recommended to plan their work so that courses in vertebrate anatomy and vertebrate embryology precede the work in human anatomy.

All students taking courses in Anatomy should have a good knowledge of French and German. For candidates for higher degrees this is indispensable.

THE BACHELOR'S DEGREE

On admission to the Division, each student specializing in the Department will arrange, in consultation with the Departmental Counselor, a program of approximately 12 courses to be taken in the Department and related departments, in addition to elective work amounting to approximately six courses.

HIGHER DEGREES

THE DEGREE OF MASTER OF SCIENCE

Departmental prerequisites.—Candidates for the degree of Master of Science in Anatomy are required to complete work in Anatomy amounting to 9 courses, of which 3 courses must be in research work chosen from Courses 428, 433, 441. Not more than 2 courses from the 200 group may be counted toward this degree.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Departmental prerequisites.—Candidates for the degree of Doctor of Philosophy in Anatomy should have undergraduate credit for the medical courses in Anatomy, or their equivalents. Advanced courses will be selected after consultation with the Department.

THE DEGREE OF DOCTOR OF MEDICINE

All candidates for the degree of Doctor of Medicine are required to take the courses listed as medical courses in Anatomy and to pass an examination covering Embryology, Histology, Gross Anatomy, and Neurology. This examination will be given at the end of the Spring Quarter of the second year.

The degree of Doctor of Medicine with honors is given when the student, in addition to completing all the work of the medical course with exceptional merit, has also shown ability to carry on and complete investigative work of excellence.

COURSES OF INSTRUCTION

The unit of instruction is a "course."

211. Cytology and Histology.—The structure of the cell and of the elementary tissues. Spring, M.-Th., 8:00-10:00, S. H. BENSLEY.

231. Preventive Medicine and Immunology.—Introductory course on the production of disease by bacterial parasites, with especial consideration of the host reactions which favor the prevention and cure of such diseases. Lectures and demonstrations. Autumn, hours to be arranged, KYES.

301-5. The Medical Courses in Anatomy.—These courses consist of lectures and laboratory work in human dissection, histology, and neurology, continuing through the Autumn, Winter, and Spring quarters of the first year of medical study. The division of his work into courses is for convenience in registration and distribution.

301, 302. Dissection of the Upper and Lower Extremities.—The student makes a complete dissection of these parts using atlases to learn the nomenclature. The skeleton is studied coincidentally in conference classes. The work is demonstrated daily to instructors and there are frequent conferences in the laboratory. $1\frac{1}{2}$ Courses. Autumn, lecture: Tu., 11:00; laboratory: *sec. a*: Tu., F., 1:30-4:30; W., 9:00-12:00; *sec. b*: Tu., 1:30-4:30; W., F., 9:00-12:00, HARVEY, SWIFT, S. H. BENSLEY.

303. Dissection of Thorax and Abdomen.— $\frac{3}{4}$ Course. Winter, lecture: Tu., 11:00; laboratory: Tu., 1:30-4:30; W., 9:00-12:00; Spring, lecture: Tu., 1:30; laboratory: *sec. a*: Tu., F., 1:30-4:30; *sec. b*: Tu., 1:30-4:30; F., 8:00-11:00, HARVEY, SWIFT, S. H. BENSLEY.

304. Dissection of Head and Neck.—Winter, lecture: W., 9:00; laboratory: Tu., 1:30-4:30; W., 9:00-12:00; Spring, Tu., 11:00; laboratory: *sec. a*: Tu., F., 1:30-4:30; *sec. b*: Tu., 1:30-4:30; F., 8:00-11:00, HARVEY, SWIFT, S. H. BENSLEY.

NOTE.—Students who have already completed part of the work in dissection may continue in accordance with the time schedule of 1932-33 during the Autumn and Winter quarters of 1933-34.

305. Histology and Neurology.—A course on the structure of the organs of the body, including the brain, sense organs, and peripheral nervous system, $1\frac{1}{2}$ Courses. Autumn, Winter, M., Tu., 9:00-11:00, Th., 9:00-12:00, BARTELMIZ, BLOOM, HOERR.

307. Anatomy of the Alimentary Tract.—A laboratory and seminar course on the gross and minute structure and development of the alimentary canal. Prerequisite: Anatomy 303. Winter, M., F., 1:30–4:30, HARVEY, S. H. BENSLEY.

308. The Locomotor Apparatus.—A study of the bones, joints, muscles, and tendons, including development, growth, structure, and repair. Prerequisite: Anatomy 301 or 302. Autumn, hours to be arranged, HARVEY, S. H. BENSLEY.

311. Microscopic Anatomy.—Structure of the tissues and organs. Summer, M.–F., 8:00–10:00, HARVEY, JOSSLYN.

312. Histology of the Organs of Internal Secretion.—(Not given in 1933–34.)

313. Histology of the Urinogenital System.—(Not given in 1933–34.)

314. History and Technique of Tissue Culture.—Autumn, hours to be arranged, BLOOM.

315. Tissue Culture in Experimental Histology.—Winter, hours to be arranged, BLOOM.

316. Elementary Neurology.—A course designed especially for non-medical graduate students. Others may be admitted after consultation with the instructor. Autumn, lecture: M., Tu., Th., 8:00; laboratory: W., F., 8:00–10:00, HERRICK.

317. Anatomy of the Nervous System.—An introductory course for medical students and others. Anatomy 304, Histology, and Zoölogy 220 are strongly recommended as preparation. Summer, Autumn, lecture: M., Tu., 11:00; laboratory: W., Th., F., 11:00–1:00, HOERR.

318. Advanced Neurology.—Special topics and methods introductory to research. Spring, hours to be arranged, HERRICK, BARTELMEZ, SWIFT.

322. Anatomy of the Foetus and Infant.—Spring, hours to be arranged, SWIFT.

323. Structure of the Female Reproductive Organs.—Prerequisite: Zoölogy 220 and Histology. Spring, hours to be arranged, BARTELMEZ.

324. Organogeny.—This course is based on the Human Embryological Collection, about 1,200 specimens. A single system or several systems of organs may be studied in detail. Prerequisite: Histology and Embryology. *Course or 2 Courses.* Spring, hours to be arranged, BARTELMEZ.

330. Preventive Medicine and Immunology.—Lecture and laboratory course concerning the histology of host reactions in immune processes. *Course or 2 Courses.* Summer, Autumn, Winter, Spring, hours to be arranged, KYES, KENTON.

331. Preventive Medicine and Immunology.—Lecture and laboratory course on host susceptibility and resistance to infection. *Course or 2 Courses.* Summer, Winter, hours to be arranged, KYES, KENTON.

332. Preventive Medicine and Immunology.—Continuation of Course 331 with special consideration of immune sera and of the qualitative and quantitative estimations of toxins and antitoxins. *Course or 2 Courses.* Spring, hours to be arranged, KYES, KENTON.

333. Morphology and Histogenesis of the Blood and Connective Tissues.—Spring, hours to be arranged, BLOOM.

341. Advanced Work.—Opportunities are afforded for advanced work in all branches of anatomy. *Course or 2 Courses* each quarter, hours to be arranged, HERRICK, HARVEY, BARTELMEZ, SWIFT.

349, 350. History of Anatomy.—A continuous course on the history of anatomy running through the Autumn and Winter quarters. $\frac{1}{2}$ *Course* each, hours to be arranged, SWIFT.

428. Neurological Research.—Admission to this course may be obtained only after consultation with the instructor in neurology. A good knowledge of general anatomy, physiology, and neurology will be required. *Course or 2 Courses.* Summer, Autumn, Winter, Spring, hours to be arranged, HERRICK.

433. Research in Preventive Medicine and Immunology.—Summer, Autumn, Winter, Spring, KYES, KENTON.

439. Cytological Research.—Attention will be directed especially to the microchemical aspects of cell structure. *Course or 2 Courses.* Autumn, Winter, Spring, hours to be arranged, R. R. BENSLEY.

440. Histophysiological Research.—The work will be especially devoted to the interpretation of the individual functions of cells and the integration of secretions. *Course or 2 Courses.* Autumn, Winter, Spring, hours to be arranged, R. R. BENSLEY.

441. Research Work.—The laboratory is equipped for the investigation of anatomical problems. Suitably trained persons who desire to engage in investigation on aspects of anatomy not included in the special research courses, including the history of anatomy, will be encouraged to do so. *Course or 2 Courses.* Summer, Autumn, Winter, Spring, HARVEY, SWIFT, HOERR, S. H. BENSLEY.

442. Research in Tissue Culture.—General problems of histology are studied by the method of cultivation of tissues in Vitro. *3 Courses.* Autumn, Winter, Spring, BLOOM.

443. Research in Human Embryology.—The collection of human uteri and embryological material is available for study to students who are adequately trained. *Course or 2 Courses.* Autumn, Winter, Spring, BARTELMEZ.

445, 446, 447. Seminar.—A limited number of students may, by arrangement with the Chairman of the Department, be admitted to a seminar in which subjects of current interest in anatomy will be discussed. $\frac{1}{2}$ *Course.* Autumn, Winter, Spring, HERRICK.

CONJOINT CLINICAL COURSES

Three conjoint courses are offered by the several clinical departments in co-operation:

301. Introductory Courses in Physical Diagnosis and History-taking.—Given jointly by the Departments of Medicine, Surgery, Obstetrics and Gynecology, and Pediatrics, this course consists of a general introduction to the organization of the hospital, the techniques of physical and laboratory diagnosis, the methods of history-taking, and principles of surgery, pediatrics, and obstetrics. It is intended specifically to prepare students for clinical externships in the University of Chicago Clinics. Students planning to register for these externships are given preference in registration for 301. Prerequisite: Pathology 301. Daily, Winter, Spring, 12:00–1:00, also M., Tu., 2:30–5:00, CLINICAL STAFF—FRANCIS, Secretary.

302. Clinical Lectures and Laboratories.—Given jointly by the Departments of Medicine, Surgery, Pathology, Obstetrics and Gynecology, and Pediatrics, as a supplement to the externships, in each of which it is included. *Medicine* will occupy two days weekly as follows: *Summer*, History of Medicine, Diseases of the Blood; *Autumn*, Roentgenology (W., 8:00–9:00 A.M.). Diseases of the Respiratory Tract, Diseases of the Heart and Arteries, Diseases of Metabolism; *Winter*, Diseases of the Gastrointestinal Tract, Infectious Diseases; *Spring*, Dermatology, Diseases of the Kidneys, Diseases of the Joints. *Surgery* will occupy two days a week as follows: *Summer*, miscellaneous; *Autumn*, mainly diseases of the head, neck, and thorax; *Winter*, mainly diseases of the abdomen and urology; *Spring*, mainly diseases of the extremities. *Obstetrics and Gynecology* will occupy 1 hour a week. *Pediatrics* will occupy 1 hour a week covering general pediatrics and contagious diseases. Credit included in Externships in the hospital. Other students may take the Course as one course. Daily, 12:00–1:00. An additional lecture is given by the Department of Surgery Th., 4:30–5:30 P.M. each quarter; *Pathology*: special classes in Necropsy, Pathology, and Special Pathology are held on M., Tu., F., 4:30 P.M., Autumn, Winter, and Spring. CLINICAL STAFF—DRAGSTEDT, Secretary.

350. Clinical Lectures in Special Fields of Medicine.—Clinical lectures given jointly by the Departments of Medicine, Surgery, Obstetrics and Gynecology, and Pediatrics, as a supplement to externships in the out-patient departments. *Medicine* will occupy two days a week as follows: *Summer*, Syphilology, Psychobiology; *Autumn*, Roentgenology, Neurology; *Winter*, Dietetics, Therapeutics; *Spring*, Medical Jurisprudence, Toxicology. *Surgery* will devote two days a week to General Surgery and surgical specialties. *Obstetrics and Gynecology* will occupy one day a week. *Pediatrics* will occupy one day a week. No credit. Daily 8:00–9:00. Credit included in externships in Out-Patient Departments. Other students may take the Course as one course. CLINICAL STAFF—GRINKER, Secretary.

THE DEPARTMENT OF HYGIENE AND BACTERIOLOGY

OFFICERS OF INSTRUCTION

WILLIAM HAY TALIAFERRO, Chairman of the Department of Hygiene and Bacteriology.

EDWIN OAKES JORDAN, PH.D., Sc.D., Professor Emeritus of Bacteriology.

WILLIAM HAY TALIAFERRO, PH.D., Professor of Parasitology; Associate Dean of the Division of the Biological Sciences.

DUDLEY BILLINGS REED, M.D., Professor of Hygiene; Director of the Health Service.

NOEL PAUL HUDSON, PH.D., M.D., Professor of Bacteriology.

STEWART ARMENT KOSER, PH.D., Assistant Professor of Bacteriology.

LUCY GRAVES TALIAFERRO, Sc.D., Research Associate in Parasitology (Volunteer).

GAIL MONROE DACK, PH.D., Assistant Professor of Bacteriology.

CLAY G HUFF, Sc.D., Assistant Professor of Parasitology.

JAMES ALEXANDER HARRISON, A.B., Instructor in Bacteriology.

JORGEN MAURICE BIRKELAND, S.M., Assistant in Bacteriology.

LUCIA J. DUNHAM, A.B., Assistant in Bacteriology.

THOMAS CHRISTMAN GRUBB, A.B., Assistant in Bacteriology.

EDWIN HERMAN LENNETTE, S.B., Assistant on Jeremiah Milbank Fund.

YELENA PAVLINOVA, S.M., Assistant in Parasitology.

DOROTHY OLIVE REITER, S.B., Research Assistant in Bacteriology.

EDITH LOUISE SWINGLE, S.B., Assistant in Bacteriology.

WILLARD DE YOUNG, S.B., Assistant in Bacteriology.

WILLIAM BURROWS, PH.D., Assistant in Bacteriology, Logan Fund.

ROBERT BARTON DIENST, A.M., Assistant in Bacteriology.

ELIZABETH PETRAN, A.B., Assistant in Bacteriology.

HERMAN N. BUNDESEN, M.D., Lecturer on Health Administration.

FELLOWS, 1933-34

LUDWIG ROLAND KUHN, S.B.

SAMUEL RAPER PENCE, JR., S.B.

FLOYD STEPHEN MARKHAM, S.B., Logan Fellow.

LESLIE ALFRED STAUBER, S.M., Logan Fellow.

JOSEPH STRITAR, S.M., Logan Fellow.

CHARLES FREDERIC SUTTON, S.M., Logan Fellow.

INTRODUCTORY

THE BACHELOR'S DEGREE

On admission to the Division, each student specializing in the Department will arrange, in consultation with the Departmental Counselor, a program of approximately 12 courses to be taken in the Department and related departments, in addition to work completed in the College.

HIGHER DEGREES

A dissertation must be submitted as part of the requirement for the degrees of Doctor of Philosophy and Master of Science. The work on which this dissertation is based may be done in any of the fields represented in the Department, such as Public Health, Bacteriology, Parasitology, or Immunology.

THE DEGREE OF MASTER OF SCIENCE

Departmental prerequisites.—A dissertation and 8 courses of advanced work are required. The courses must be selected with the approval of the Chairman of the Department.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Departmental prerequisites.—A dissertation presenting the results of original research is required. This research must be conducted under the direction of the Department. In addition, Courses 301 and 320 must be satisfactorily completed together with such other courses offered by this or related departments as may be determined in consultation with the Chairman of the Department.

THE DEGREE OF DOCTOR OF MEDICINE

For the degree of Doctor of Medicine the minimum course requirement in the departments of Hygiene and Bacteriology and Pathology consists of three courses in these departments.

The student must pass a departmental examination in Hygiene and Bacteriology. This examination will be given on the completion of Course 202 or its equivalent and its scope will correspond to the field covered by Courses 201 and 202.

Students who elect to become candidates for the degree of Doctor of Medicine with honors in the Department of Hygiene and Bacteriology must have done advanced work in excess of the minimum requirement as stated above, during at least three quarters, leading to the preparation of a dissertation acceptable to the Department of Hygiene and Bacteriology, and constituting an actual contribution to knowledge.

DEPARTMENTAL CLUB

All candidates for higher degrees in the Department are expected to attend the meetings of the Bacteriology Club which are held on alternate Thursdays throughout the year under the direction of members of the staff.

COURSES OF INSTRUCTION

The unit of instruction is a "course."

COURSES IN THE COLLEGE

110. An Introduction to Public Health.—KOSER. (Not given in 1933–34.)

COURSES IN THE DIVISION

201. General Bacteriology.—Lecture and laboratory instruction in the fundamental principles of bacteriology and their applications to industry and hygiene. Designed for general-science students. Prerequisite: Chemistry 101, 102, and 103 (or 104 and 105), and Zoölogy 101 or equivalent. Summer, M.–F., 10:00–12:00; Autumn, hours to be arranged. (University College, quadrangles); Winter, M.–F., 8:00–10:00, KOSER.

202. The Pathogenic Micro-organisms.—The study of pathogenic bacteria and the principles of infection and immunity, by lecture, conference, and laboratory methods. A brief survey of medical parasitology concludes the course. Prerequisite: Bacteriology 201, Anatomy 211 (or 311), and, for non-medical students, consent of instructor. Summer, M.-F., 8:00-10:00, JORDAN, DACK, HUFF, WOOLPERT; Autumn, M.-F., 1:30-3:30, HUDSON, HUFF, WOOLPERT; Spring, Bacteriology for medical students only. Prerequisite: Admission to Medical School or consent of instructor. *Course.* M., W., 9:00-12:00; Tu., 9:00-11:00, HUDSON, DACK, WOOLPERT.

210. Public Hygiene.—An introductory course dealing with problems of community hygiene such as water supply, sewage disposal, foods, insect-borne diseases, infant welfare, tuberculosis, and other public-health problems. The principles of vital statistics and epidemiology are included. *Course,* Winter (University College), M., Th., 7:00-9:00, KOSER.

301. Advanced Laboratory Methods.—Primarily for research students. Study of special cultural methods, technique of animal experimentation, serology, and other laboratory procedures used in advanced bacteriology and parasitology. Prerequisite: Bacteriology 202 and consent of instructor. Limited to 15. Winter, M.-F., 10:00-12:00, DACK.

302. Filterable Viruses.—HUDSON.—(Not given in 1933-34.)

303. Public Health.—The STAFF. (Not given in 1933-34.)

304. Immunology.—The STAFF. (Not given in 1933-34.)

305. A survey of the Current Problems in Bacteriology.—A discussion on current problems of bacteriology of special interest. Prerequisite: Consent of the instructor. $\frac{1}{2}$ *Course,* Autumn, Spring, M.-W., 9:00, JORDAN.

306. Variation and Inheritance in Micro-organisms.—THE STAFF. (Not given in 1933-34.)

320. Parasitology.—A general survey of our knowledge of the parasites of man. It consists of three approximately equal parts: (1) protozoology, (2) helminthology, and (3) insects of medical importance. Prerequisite: consent of the Department and Zoology 103. Limited to 15. Summer, Winter, M.-F., 1:30-3:30, HUFF.

370. Advanced Bacteriology, Parasitology, and Public Health.—Open to a limited number of qualified students and to graduates in medicine who wish to prepare for research or to obtain special training in some of the branches of public-health work. Prerequisite: Bacteriology 301 or equivalent and consent of the Staff. Each quarter, hours to be arranged, JORDAN, TALIAFERRO, HUDSON, KOSER, DACK, HUFF.

375. Special Public-Health Problems.—[Not given in 1933-34.]

410. Research (Master's Dissertations).—Each quarter, hours to be arranged, HUDSON, KOSER, DACK, HUFF.

420. Research (Doctor's Dissertations).—Each quarter, hours to be arranged, JORDAN, TALIAFERRO, HUDSON, KOSER, DACK, HUFF.

DEPARTMENT OF MEDICINE

OFFICERS OF INSTRUCTION

GEORGE FREDERICK DICK, Chairman of the Department of Medicine.

ALBERT BAIRD HASTINGS, PH.D., Research Professor of Biochemistry, Lasker Foundation.

PAUL CHESLEY HODGES, PH.D., M.D., Professor of Roentgenology.

OSWALD HOPE ROBERTSON, M.D., S.M., Professor of Medicine.

GEORGE FREDERICK DICK, M.D., Sc.D., Professor of Medicine.

JOSEPH ALMARIN CAPPS, A.M., M.D., Clinical Professor of Medicine.

JOSEPH LEGGETT MILLER, M.D., Clinical Professor of Medicine.

NOEL PAUL HUDSON, PH.D., M.D., Professor of Bacteriology.

PERCIVAL BAILEY, PH.D., M.D., Professor of Neurology.

WILLIAM C. WOODWARD, M.D., LL.M., LL.D., Professorial Lecturer in Medical Jurisprudence.

EMMET BLACKBURN BAY, S.B., M.D., Associate Clinical Professor of Medicine, Assistant Director of the University Health Service.

SAMUEL WILLIAM BECKER, S.B., M.D., Associate Professor of Dermatology, Kuppenheimer Research Foundation.

ROBERT GUSTAV BLOCH, M.D., Associate Professor of Medicine.

LOUIS LEITER, PH.D., M.D., Associate Professor of Medicine, Lasker Foundation.

CHARLES PHILLIP MILLER, JR., S.M., M.D., Associate Professor of Medicine.

WALTER LINCOLN PALMER, PH.D., M.D., Associate Professor of Medicine.

ROY RICHARD GRINKER, S.B., M.D., Associate Professor of Neurology.

STEPHEN POLJAK, M.D., Associate Professor of Neurology, Douglas Smith Foundation.

WILLIAM ERNEST CARY, PH.D., M.D., Assistant Clinical Professor of Medicine.

HARRY LEE HUBER, PH.D., M.D., Assistant Clinical Professor of Medicine.

MARIE ORTMAYER, M.D., Assistant Clinical Professor of Medicine.

FLORENCE HAZEL SMITH, S.B., Assistant Professor of Nutrition.

THEODORE EDWARD FRIEDEMANN, PH.D., Research Assistant Professor of Chemical Bacteriology; Bartlett Memorial Fellow.

MARGARET GERARD, PH.D., M.D., Assistant Clinical Professor of Psychiatry, Psychiatrist of the Student Health Service.

HENRY LENZEN SCHMITZ, PH.D., M.D., Assistant Professor of Medicine.

RUTH ELAINE TAYLOR, S.B., M.D., Assistant Clinical Professor of Medicine, Health Service.

IRENE SANDIFORD, PH.D., Assistant Professor of Biochemistry, Hertz Fund.

MAX ERNEST OBERMAYER, M.D., Assistant Professor of Dermatology, Kuppenheimer Research Foundation.

BYRON FRANKLIN FRANCIS, S.B., M.D., Assistant Professor of Medicine.

KNUTE AXEL REUTERSKIOLD, PH.D., M.D., Assistant Professor of Medicine.

E. S. GUZMAN BARRON, M.D., Research Assistant Professor of Biochemistry, Lasker Foundation.

DOUGLAS GORDON CAMPBELL, M.D., M.R.C.P., Assistant Clinical Professor of Psychiatry, Health Service.

- ERNESTINE KANDEL, A.M., M.D., Research Instructor in Medicine, Douglas Smith Foundation.
- LOWELL THELEVELL COGGESHALL, A.M., M.D., Instructor in Medicine.
- THEODORE EPHRAIM HEINZ, M.D., Instructor in Medicine.
- JAMES BERNARD GRAESER, M.D., Research Instructor in Medicine, Douglas Smith Foundation.
- HENRY R. JACOBS, M.D., Instructor in Medicine.
- ALLAN TITSWORTH KENYON, M.D., Instructor in Medicine.
- KATHLEEN MUIR, M.D., Instructor in Dermatology.
- GRACE HILLER, M.D., Instructor in Medicine.
- ALFRED C. LEDOUX, M.D., Instructor in Roentgenology; Resident in Roentgenology.
- GEORGE E. MILLER, PH.D., M.D., Clinical Instructor in Medicine.
- HENRY TUBBS RICKETTS, M.D., Instructor in Medicine, Resident.
- ELWOOD WHITTIER MASON, S.B., M.D., Instructor in Medicine.
- LILLIAN S. EICHELBERGER, PH.D., Research Associate in Medicine, Lasker Foundation.
- ALDEN KINNEY BOOR, PH.D., Research Associate in Medicine, Kuppenheimer Research Fund.
- BERTHA KAPLAN SPECTOR, PH.D., Research Associate in Medicine, Douglas Smith Foundation.
- WRIGHT ADAMS, M.D., Assistant in Medicine.
- JAMES ERNEST DAVIS, PH.D., Research Assistant in Medicine, Lasker Foundation.
- ROBERT A. FRISCH, M.D., Assistant and Assistant Resident in Medicine.
- WAYNE GORDON, M.D., Assistant in Medicine.
- GEORGE FREDERICK HARSH, M.D., Clinical Assistant.
- GEORGE LEVITT, M.D., Research Assistant in Medicine, Lasker Foundation.
- S. P. PERRY, M.D., Assistant in Roentgenology.
- ROBERT TRIGG PORTER, M.D., Assistant and Assistant Resident in Medicine.
- FREDERIC EASTLAND TEMPLETON, M.D., Assistant and Assistant Resident in Roentgenology.
- JOHN MOKMA VAN DE ERVE, M.D., Assistant and Assistant Resident in Dermatology.
- MARY AGNES HARRISON, A.B., Assistant in Medicine.
- DOROTHY GASTON, PH.D., Assistant in Medicine.
- LOUIS LLOYD PRAVER, M.D., Assistant in Dermatology.
- JULIUS E. GINSBERG, M.D., Assistant in Dermatology, Assistant Resident.
- HELEN HOWARD, Assistant in Medicine.
- ARVID M. JOHNSON, M.D., Assistant and Assistant Resident in Medicine.
- EVELYN STEVENS HUNT, S.M., Assistant in Medicine.
- PAUL M. LEVIN, M.D., Assistant and Assistant Resident in Medicine.
- HELEN VAN SANT, Assistant in Medicine.

INTRODUCTORY

The Department of Medicine as at present organized represents the fields of General Medicine, Neurology, Dermatology, and Roentgenology. Instruction in all of these fields will be offered during the academic year 1933-34.

The Department occupies the Frank Billings Medical Clinic, which by virtue of its intimate physical relationship with the Albert Merritt Billings Hospital and the Max

Epstein Clinic concentrates all of the activities of the Department in a single architectural unit.

The Albert Merritt Billings Hospital provides approximately one hundred beds for the Department of Medicine, while the Max Epstein Clinic provides space and facilities for the examination and treatment of out-patients. The laboratories of the Department are equipped for the methods now usually employed in the investigation of disease, either in the study of the individual patient or in the advancement of knowledge concerning disease; they include laboratories of Physiology, Bacteriology, Serology, and Chemistry.

PLAN OF INSTRUCTION

The Department of Medicine aims to present the subject matter of medicine, that is to say, of disease, as a branch of human knowledge. It recognizes that instruction in this subject may be sought by the student for diverse reasons and with diverse ends in view. For this reason the courses have been planned with the view of presenting the range and variety of the subject matter of disease, in so far as personnel and facilities permit, rather than of attempting to compress the whole of medicine into a standardized curriculum. Various orderly sequences are possible to meet various needs, and the Department will undertake to advise students in the selection and arrangement of courses when such advice is desired. A series of courses will be suggested which will enable the average student studying for the degree of doctor of medicine to cover the ground required by the Department to fulfil State Licensing Board requirements.

Experience has shown that the subject matter of disease is best taught by allowing students direct contact with patients, as well as the opportunity to observe actual work of investigators in clinical medicine. Therefore, the plan of instruction involves the division of the student body into small groups for the purpose of providing the maximum contact between students and patients and between instructors and students. The practical experience of the student is supplemented by the necessary amount of didactic instruction.

Each student whose work in the Department warrants it will be assigned laboratory space according to his requirements, and he will have access to this at all hours of the day or night. He will also have access to equipment which is provided for common use, as centrifuges, balances, sterilizers, incubator rooms, refrigerators, and hoods. It is the intention to provide each student with the facilities of a *medical* laboratory and to put these facilities freely at his disposal.

Students whose work brings them in contact with patients will be required to wear clean white coats, of a design specified by the Department, whenever they enter parts of the Clinic to which patients are admitted.

RESEARCH

In addition to assuming the task of teaching medicine, the Department places emphasis on its study of advancing knowledge with respect to disease. While the primary efforts of the Department in investigation will be directed toward the study of disease processes, it is recognized that strict adherence to this imposes limits which are too narrow, and that investigations in the Department may touch on all branches of science contributory to medicine. Students may pursue investigations under the direction of members of the Department, or if properly qualified, may work independently, and such facilities as the Department has at its disposal will be offered to research students and

independent investigators. The Department already possesses funds from several endowments for the specific purpose of advancing medical knowledge.

For the purpose of carrying on its clinical and teaching duties and its research the Department is loosely subdivided into sections, each with a chief who will have primary responsibility for dissertations based on studies pursued within his division and under his direction.

FELLOWSHIPS

A number of fellowships, open to suitably qualified students, are available for research in the Department of Medicine. These fellowships, which as a rule provide a stipend and the expenses of research, are awarded to graduate students (with or without the M.D. degree) on recommendation of the Chairman of the Department, to whom application for further information should be made.

DEGREES

THE DEGREE OF MASTER OF SCIENCE

Admission to study for the degree of Master of Science in the Department of Medicine will be made upon the recommendation of the Departmental Committee on the Master of Science degree.

The Department of Medicine will recommend students for the degree of Master of Science in the Division of Biological Sciences when the following requirements have been met:

1. Compliance with the regulations of the Divisional Faculty with regard to the technical requirements for the degree, including one year of special advanced work.
2. Presentation of a satisfactory dissertation embodying the results of original research in General Medicine, Neurology, Dermatology, Roentgenology, or Biochemistry.
3. Certification by the appropriate departments of the candidate's fulfilment of the foreign-language requirements.
4. Successful completion of a course of study as approved by the Departmental Committee.
5. Successful completion of the Master's examination, designed to test the candidate's general medical knowledge as covered by Courses 303 and 323, and his competency in his chosen field.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Admission to study for the degree of Doctor of Philosophy in the Department of Medicine will be upon recommendation of the Departmental Committee on the degree of Doctor of Philosophy. The student will be admitted to the candidacy upon passing a preliminary examination covering the field of General Medicine. The scope of this examination is covered by Courses 303 and 323.

The Department of Medicine will recommend students for the degree of Doctor of Philosophy in the Division of Biological Sciences when the following requirements have been met:

1. Compliance with the regulations of the Divisional Faculty with regard to the technical requirements for the degree, including three years of special advanced work.
2. Presentation of a dissertation embodying the results of original research in General Medicine, Neurology, Dermatology, or Roentgenology or Biochemistry. This must form an actual contribution to existing knowledge and be worthy of publication in a

journal devoted to the medical sciences. Simple case studies or reports will not be considered as coming within this definition.

3. Successful completion of the Doctor's examination. The candidate will be examined not only as to depth of knowledge in the particular field treated by his dissertation, but also as to his breadth of knowledge in general medicine and the medical sciences as a whole.

4. Certification by the appropriate departments of the candidate's fulfilment of the foreign-language requirements.

5. Successful completion of a course of study as approved by the Departmental Committee.

THE DEGREE OF DOCTOR OF MEDICINE

The Department of Medicine will certify students as having received the approval of the Department for the degree of Doctor of Medicine when the following requirements have been met:

1. Satisfactory completion of not fewer than $4\frac{1}{2}$ courses of graduate grade (including advanced standing for work done elsewhere) in General Medicine, Neurology, Dermatology, and Roentgenology, of which not fewer than 3 courses shall have been in this Department.

2. Satisfactory completion of a written, practical, and oral examination covering the entire field of General Medicine, Neurology, Dermatology, and Roentgenology. This examination will cover the field to which Courses 303 and 323 are devoted.

3. The M.D. degree with honors in Medicine will be recommended on the basis of additional work in the Department leading to a thesis which must have been presented to and accepted by the Department. The topic must have been chosen by the end of the junior year and the Chairman of the Department so notified. The thesis must have been submitted to the instructor under whose direction the work was done not later than two months preceding the granting of the four-year certificate.

COURSES OF INSTRUCTION

The unit of instruction is a "course."

I. GENERAL MEDICINE

Conjoint Clinical Course 301. Introductory Course.—(See page 28.)

Conjoint Clinical Course 302.—(See page 28.)

Conjoint Clinical Course 350.—(See page 28.)

303. Externship in Hospital.—Includes Conjoint Clinical Course 302. Students make rounds daily with the chiefs of the various hospital services. They are assigned to patients and present their histories for discussion and criticism at these periods. $2\frac{1}{4}$ Courses. Prerequisite: Pathology 302. Summer, Autumn, Winter, Spring, STAFF MEDICAL DEPARTMENT.

310. Allergic Phenomena.—A lecture course on the theoretical and clinical aspects of the allergies. M., F., 8:00, $\frac{1}{2}$ Course, Autumn, HUBER.

315. Clinical-Pathological Conferences.—Weekly conferences with the Department of Pathology and the clinical departments, on correlation of clinical study of cases with morbid anatomy. One hour a week. No credit. F., 4:30.

320. Clinical Conferences.—Required of the externs. No credit. W., 4:30-5:30.

***323. Externship in Out-Patient Department.**—Medicine—Students are assigned to various special clinics in rotation so as to cover the fields of Medicine as completely as

* Required for all advanced courses (345-67).

possible. Prerequisite: $1\frac{1}{2}$ Courses of Medicine 303 or equivalent. This course includes Conjoint Clinical Course 350. Summer, Autumn, Winter, Spring, STAFF: SCHMITZ, Secretary.

351. Advanced Infectious Disease.—Winter, MILLER, GRAESER, COGGESHALL.

†352. Advanced Hematology.—Limited to 4. Spring, ROBERTSON, KANDEL.

†355. Advanced Lung Diseases.—Autumn, Spring, BLOCH, FRANCIS.

†357. Advanced Cardiology.—Summer, Winter, BAY.

†358. Advanced Metabolic Diseases.—Autumn, Spring, LEITER, SCHMITZ.

†359. Advanced Renal and Vascular Diseases.—LEITER, SCHMITZ.

†360. Advanced Gastro-enterology.—PALMER, ORTMAYER.

†390. Advanced Physio-chemical Methods Applied to Medicine.—Blood as a physico-chemical system under normal and pathological conditions and the principles and technique of gas analysis as applied to liquids and gases. Spring, HASTINGS.

†401-4. Research in General Medicine.—Open to qualified students by arrangement with the chief of the division concerned.

401. Chemical Division.—HASTINGS.

402. Physiological Division.—PALMER, LEITER.

403. Biological Division.—ROBERTSON, MILLER, FRIEDEMANN.

404. Research in Diseases of the Respiratory System.—BLOCH, FRANCIS.

412. Seminar in Lobar Pneumonia.—ROBERTSON.

413. Seminar in Infectious Diseases.—ROBERTSON.

II. DERMATOLOGY

Conjoint Clinical Course 301.—(See page 28.)

Conjoint Clinical Course 302.—(See page 28.)

323. Externship in the Out-Patient Department.—(See page 28.)

328. Externship in the Out-Patient Department: Dermatology.—Limited to 8. Prerequisite: $2\frac{1}{2}$ Courses of Medicine 323 or equivalent. Summer, Autumn, Winter, Spring. $\frac{1}{2}$ Course or Course, recommended for $\frac{1}{2}$ Course. Morning hours, BECKER, OBERMAYER.

345. Therapy of Syphilis.—Therapy as modified by all types of syphilitic processes. By arrangement, 3 hours a week. BECKER, OBERMAYER.

362. Advanced Dermatology.—Instruction in dermatologic histopathology, bacteriology, parasitology, and immunology. Lectures and demonstrations. 1, 2, or 3 Courses. BECKER, OBERMAYER.

415. Research in Dermatology.—Open to qualified students by arrangement with chief of division. 1, 2, or 3 Courses a quarter. BECKER, OBERMAYER.

418. Seminar in Dermatology.—Weekly conferences on investigation in progress and on current literature and on subjects of current interest. Open to students on invitation only. One hour a week. No credit.

III. NEUROLOGY AND NEUROSURGERY

Conjoint Clinical Course 301.—(See page 28.)

303. Externship in Hospital.—(See page 28.)

323. Externship in the Out-Patient Department.—(See page 28.)

*331. Externship in the Out-Patient Department: Neurology.—Limited to 8. Prerequisite: $2\frac{1}{2}$ Courses of Medicine 323 or equivalent. Summer, Autumn, Winter, Spring. $\frac{1}{2}$ Course, Course, or $1\frac{1}{2}$ Courses. M., Tu., Th., F., S., GRINKER, BAILEY.

332. Ward Visits: Neurology.—Prerequisite: Consent of instructor. $\frac{1}{2}$ Course. GRINKER.

Conjoint Clinical Course 350.—(See page 28.)

* Required for all advanced courses (345-67).

† These courses are 1, 2, or 3 Courses.

363. Advanced Neurology.—10, 20, or 30 hours a week. 1, 2, or 3 *Courses*. BAILEY, GRINKER.

364. Neuropathology.—Laboratory exercises and conferences on the general and special pathology of the central nervous system. Limited to six. $\frac{1}{2}$ *Course*, each quarter, two hours a week, GRINKER.

416. Research in Diseases of the Nervous System.—Open to qualified students by arrangement with the chief of the section. 1, 2, or 3 *Courses* a quarter. BAILEY, GRINKER.

IV. ROENTGENOLOGY

Conjoint Clinical Course 350.—(See page 62.)

365. Roentgenology.—A laboratory course covering the simpler aspects of the physics of X-rays, including laboratory instruction in the operation of X-ray apparatus and the application of X-rays to biological problems. $1\frac{1}{2}$ *Courses*. 5 weeks, June 19–July 21, inclusive. Lectures, laboratory, quiz. 1:00–5:00, M.–F. 9:00–11:00, Sat. HODGES, BRUNDSCHWIG, LEDOUX, AND OTHERS, with the assistance of members of the Department of Physics.

366. Clinical Roentgenology.—Practical work in diagnostic and therapeutic roentgenology. Equivalent to the work required of an assistant resident. 1–3 *Courses* each quarter. HODGES, BRUNDSCHWIG, LEDOUX.

367. Advanced Clinical Roentgenology.—A continuation of 366. Equivalent to the work required of senior-assistant resident or resident. 1–3 *Courses* each quarter. HODGES, BRUNDSCHWIG, LEDOUX.

NOTE.—Residencies in Roentgenology are hospital appointments providing compensation. Students will be accepted for work in 366 and 367 without the necessity of hospital appointment, and hospital appointments may be made without requiring registration in Courses 366 and 367. As far as possible, however, applicants for hospital appointments who are registered in the Division will be given preference over applicants not intending to register.

414. Research in Roentgenology.—As a rule, students will not be registered for credit in this course until after completion of work equivalent to 365, 366, 367. 3 *Courses*. HODGES, BRUNDSCHWIG, LEDOUX.

THE DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

OFFICERS OF INSTRUCTION

FRED LYMAN ADAIR, Chairman of the Department of Obstetrics and Gynecology.

FRED LYMAN ADAIR, M.A., M.D., Mary Campau Ryerson Professor of Obstetrics and Gynecology.

JOSEPH BOLIVAR DELEE, M.A., M.D., Professor of Obstetrics and Gynecology.

WILLIAM JOSEPH DIECKMANN, S.B., M.D., Associate Professor of Obstetrics and Gynecology.

M. EDWARD DAVIS, S.B., M.D., Assistant Professor of Obstetrics and Gynecology.

MANUEL SPIEGEL, M.D., Instructor in Obstetrics and Gynecology, Resident.

HENRY CLOSE HESSELTINE, S.M., M.D., Instructor in Obstetrics and Gynecology.

FRANK EDWARD WHITACRE, M.D., Instructor in Obstetrics and Gynecology, Resident.

ARTHUR BISHOP HUNT, S.M., M.D., Assistant in Obstetrics and Gynecology, Assistant Resident.

EVAN SHUTE, A.B., M.D., Assistant in Obstetrics and Gynecology, Resident.

EDWIN FRANCIS DAILY, M.D., Assistant in Obstetrics and Gynecology, Assistant Resident.

WILLIAM GERALD ROGERS, M.D., Assistant in Obstetrics and Gynecology, Assistant Resident.

HERBERT LEON MICHEL, M.D., Assistant in Obstetrics and Gynecology, Assistant Resident.

KENNETH GRANT, M.D., Assistant in Obstetrics and Gynecology, Assistant Resident.

LAURA DASEF, A.B., M.D., Assistant in Obstetrics and Gynecology, Assistant Resident.

RUTH MAUDE WATTS, Ph.D., Research Assistant in Obstetrics and Gynecology, Douglas Smith Foundation.

INTRODUCTORY

The Department of Obstetrics and Gynecology represents a unified Department covering both branches.

Laboratory and office facilities for the Department are provided in the University's section of the new Chicago Lying-in Hospital and Dispensaries in affiliation with the University of Chicago. The new Hospital, located adjacent to the other units of the University Clinics, contains clinical facilities for Obstetrics, including an adult bed capacity of 150 and an out-patient department—a unit of the Max Epstein Clinic. All of the facilities of this hospital and its dispensaries, as well as all of the facilities of the University Clinics, are available to the Department of Obstetrics and Gynecology. Home-delivery service is conducted from headquarters in this Hospital. Until a special gynecological pavilion is erected, part of the work of the Department will be conducted in the Albert Merritt Billings Hospital just across the street from the Lying-in Hospital.

PLAN OF INSTRUCTION

Obstetrics and Gynecology will be taught as a single subject, and the close relationship of pregnancy, parturition, and the puerperium to disorders and diseases related to the generative organs of the human female will be brought out. Clinical instruction and

practical work will have to be separated of necessity, but students will receive instruction in both with at least 65 per cent stress on Obstetrics, covering antepartum, intrapartum, and postpartum care. The general plan will consist of introductory lectures, externships in the hospitals and out-patient clinics, the opportunity to observe operations, normal and abnormal labors, and the opportunity to participate in the delivery of patients.

Special courses and the opportunity for investigative work will be offered, as desired, to those who are properly qualified to participate.

HIGHER DEGREES

Candidates must be acceptable to the Department and conform to the general requirements of the Division of the Biological Sciences for these degrees. No such degree will be recommended in Obstetrics and Gynecology until the candidate has proved his fitness to develop as a specialist in these branches.

A thesis will also be required which will compare in magnitude with those usually required for such degrees in other branches.

The granting of a Master's degree will in general not be favorably considered by the Department.

THE DEGREE OF DOCTOR OF MEDICINE

In addition to the general requirements, all candidates for the degree of Doctor of Medicine are required to complete a minimum of 2 courses in Obstetrics and Gynecology, of which at least $\frac{1}{2}$ course must be devoted to participation in the care of confinement cases. [3 courses recommended.] Written and oral examinations must be satisfactorily completed.

Candidates for the M.D. degree with honors in Obstetrics and Gynecology must present a thesis which is acceptable to the Department and do work of a high order.

Internships will be available, especially in Obstetrics, but applications must be filed well in advance.

FELLOWSHIPS

Fellowships from the Douglas Smith Foundation and the Josiah Macy, Jr., Foundation may be awarded to properly qualified candidates for research work in the Department of Obstetrics and Gynecology. These fellowships, which as a rule provide a stipend and the expenses of research, are awarded on recommendation of the Chairman of the Department to whom application for further information should be made.

COURSES OF INSTRUCTION

The unit of instruction is a "course."

Conjoint Clinical Course 301. Introductory Course.—(See page 28.)

Conjoint Clinical Course 302.—(See page 28.)

303. Externship in Hospital.—The students share in the care and study of patients and thus receive practical instruction in the observation and care of both obstetrical and gynecological cases. This course includes Conjoint Clinical Course 302. 1-3 Courses. Offered each quarter. Recommended in Junior year. Prerequisite: Conjoint Clinical Course 301, Pathology 302. Limited to 6. ADAIR, DIECKMANN, DAVIS, AND STAFF.

304. Externship in Out-Patient Department in Obstetrics and Gynecology.—Given in the Max Epstein Clinic. This course includes Conjoint Clinical Course 350. Daily either every morning or every afternoon each quarter. Prerequisite: 303. 1½-3 Courses. ADAIR, DIECKMANN, DAVIS, AND STAFF.

305. Practical Course.—Opportunity for the study and observation of cases at the Chicago Lying-in Hospital without participation in the conduct of labor. Two weeks' full time. Limited to 2 students at any one time. Given each quarter. Prerequisite: Pathology 302 and Conjoint Clinical Course 301. Reserve places in advance. $\frac{1}{2}$ Course. DELEE, ADAIR, AND STAFF.

306. Practical Course.—Supervised observation and management of cases during pregnancy, parturition, and the puerperium. Two weeks' full time in the Chicago Lying-in Hospital and Home Service Department. Living quarters furnished at a small charge. Offered each quarter. May also be taken at the Chicago Maternity Center. Prerequisite: 2 courses in Obstetrics. Places should be reserved at least one year in advance. HESSELTINE, SPIEGEL, WHITACRE.

308. Special Pathology in Obstetrics and Gynecology.—A course for those especially interested in this field of gross and microscopic pathology. Offered Spring and Autumn quarters. Twice weekly through the quarter. Prerequisite: Obstetrics and Gynecology 303. ADAIR, DAVIS, AND STAFF.

Conjoint Clinical Course 350.—(See page 28.)

351. Advanced Work in Obstetrics and Gynecology.—Special courses in clinical, laboratory, and experimental work may be arranged during any quarter. Prerequisite: 2 courses in Obstetrics and Gynecology. ADAIR, DIECKMANN, DAVIS, AND STAFF.

401. Research in Obstetrics and Gynecology.—Open to qualified students by arrangement. Hours to be arranged. 1, 2, or 3 Courses. ADAIR, DIECKMANN, DAVIS.

411. Seminar.—Once weekly. No credit. ADAIR AND STAFF.

412. Special Obstetrical Conference.—Once weekly. No credit. DELEE.

THE DEPARTMENT OF PATHOLOGY

OFFICERS OF INSTRUCTION

HARRY GIDEON WELLS, Chairman of the Department; Director of the Otho S. A. Sprague Memorial Institute.

LUDVIG HEKTOEN, M.D., Sc.D., LL.D., Professor Emeritus of Pathology; Director of the John McCormick Institute for Infectious Diseases.

HARRY GIDEON WELLS, Ph.D., M.D., Professor of Pathology.

PAUL ROBERTS CANNON, Ph.D., M.D., Professor of Pathology.

ELEANOR M. HUMPHREYS, A.B., M.D., Assistant Professor of Pathology.

MERCY AURORA SOUTHWICK, M.D., Curator and Instructor in Pathological Technic.

SION WOODSON HOLLEY, S.B., Assistant in Pathology.

KENNETH LOUIS BURT, S.B., Assistant in Pathology.

PATRICK ARTHUR DELANEY, Ph.D., M.D., Research Associate in Pathology, Douglas Smith Foundation.

HYMAN WINTERS, S.B., M.D., Assistant in Pathology, Assistant Resident.

LYOYD F. CATREN, M.D., Research Assistant in Pathology, Douglas Smith Foundation.

MEMBERS OF THE OTHO S. A. SPRAGUE MEMORIAL INSTITUTE STAFF

MAUDE SLYE, A.B., Associate Professor of Pathology.

HARRIET F. HOLMES, A.B., Research Associate in Pathology.

JULIAN HERMAN LEWIS, Ph.D., M.D., Associate Professor of Pathology.

SIEGFRIED MAURER, S.B., M.D., Associate Professor of Pathology.

DAVID R. BRIGGS, Ph.D., Assistant Professor of Chemistry.

CARL MAURITZ MARBERG, Ph.D., Assistant Professor of Chemistry.

MARY SAWYER SHEPPARD, S.M., M.D., Assistant Professor of Pathology.

EDITH FARRAR, A.B., Assistant in Pathology.

FELLOWS, 1933-34

JOHN PERRIGO FOX, S.B.

PAUL E. STEINER, M.S., M.D., National Research Council Fellow.

INTRODUCTORY

The courses offered in the University by the Department include the required work in Pathology in the curriculum of the study of Medicine, as well as advanced courses arranged for those desiring a more extended knowledge of the subject, and for those wishing to qualify themselves for research.

HIGHER DEGREES

THE DEGREE OF MASTER OF SCIENCE

Departmental prerequisites.—A dissertation and 8 courses of work for a higher degree in Pathology are required, if all the work is in Pathology. Substitution of courses in Bacteriology and Immunity may be made with the approval of the Head of the Department, but Courses 301, 302, 303, and at least 3 courses of research must be taken in Pathology.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Departmental prerequisites.—Courses required of all candidates are Pathology 301, 302, and at least 3 courses in Course 303; also Bacteriology 202, and a course covering the fundamental principles and methods of Immunology. Courses in Hygiene and Bacteriology may be accepted as equivalent to courses in Pathology to a maximum of 5 courses with the approval of the Head of the Department. A dissertation must be presented representing the results of original research under the direction of an officer of the Department, but so conducted as to indicate the ability of the candidate to conduct independent original investigation.

THE DEGREE OF DOCTOR OF MEDICINE

The minimum course requirement for the degree of Doctor of Medicine in the departments of Hygiene and Bacteriology, and Pathology consists of three courses in these departments.

The student must pass a general departmental examination in pathology. This will be given on the completion of Conjoint Clinical Course 302, and its scope will correspond to the field covered by Pathology Courses 301, 302, and the part of Conjoint Clinical Course 302 which is devoted to Pathology. The examination would thus be taken ordinarily at the end of the third year of medical work.

Students who elect to become candidates for the degree of Doctor of Medicine with honors, in the Department of Pathology must have done advanced work in excess of the minimum requirements as stated above during at least three quarters, leading to the preparation of a dissertation acceptable to the Department of Pathology, and constituting an actual contribution to knowledge.

COURSES OF INSTRUCTION

301. General Pathology and Pathological Histology.—A practical laboratory course in general pathologic histology, supplemented by the study of gross specimens, attendance at necropsies, and by recitations in general pathology. Prerequisite: Histology, Bacteriology 202, Physiology, Physiological Chemistry, and Visceral Anatomy. Laboratory, recitations, and lectures; 9 hours a week. Autumn and Winter, lecture: M.-Tu., 1:30; Sat., 8:00; laboratory: M., Tu., 2:30-4:30; Sat., 9:00-11:00; Summer, 1934, CANNON, HUMPHREYS, STEWART, AND ASSISTANTS.

302. Pathology of Infectious Granulomas and Tumors.—Summer, lecture: M., W., F., 8:00; laboratory: Tu., Th., Sat., 8:00-10:00; Winter, lecture: M., Tu., 1:30; Th., 12:00; laboratory: M., Tu., W., 10:00-12:00; Spring, lecture: M., W., F., 8:00; laboratory: Tu., Th., Sat., 8:00-10:00; CANNON, HUMPHREYS, STEWART, AND ASSISTANTS.

303. Advanced Pathology.—Open to a limited number of students who have credit in general pathology. Laboratory work will be given in pathological technic, the study and recording of necropsies, and special pathological material. Hours to be arranged for each student. Each quarter, WELLS, SOUTHWICK.

305. Defensive Mechanisms of the Body.—A conference and laboratory course on the methods employed by the body in defense against disease. Prerequisite: General Bacteriology. Autumn, hours to be arranged, CANNON.

315. Clinical-Pathological Conferences.—Joint conferences of clinical departments with the Department of Pathology on correlation of clinical studies with necropsy findings. No credit. M., Tu., 4:30, WELLS, PHEMISTER, DICK, AND OTHERS.

401. Research in Pathology.—Open to a limited number of qualified students and graduates in medicine. Hours to be arranged for each student. Each quarter, HEKTOEN, WELLS, CANNON, HUMPHREYS.

Conjoint Clinical Course 302.—For Juniors in Pathology. M., Tu., 4:30-5:30, WELLS, CANNON, HUMPHREYS.

THE DEPARTMENT OF PEDIATRICS

OFFICERS OF INSTRUCTION

FREDERIC W. SCHLUTZ, Chairman of the Department of Pediatrics.

FREDERIC W. SCHLUTZ, M.D., Richard T. Crane Professor of Pediatrics.

JOSEPH BRENNEMANN, Ph.B., M.D., Professor of Pediatrics.

BENGT LEOPOLD KNUTSSON HAMILTON, M.D., Sc.D., Professor of Pediatrics.

WALFRED WILLIAM SWANSON, S.M., M.D., Associate Professor of Pediatrics.

ARCHIBALD HOYNE, S.B., M.D., Associate Clinical Professor of Pediatrics.

HERBERT EZRA CHAMBERLAIN, A.B., M.D., Associate Professor of Psychiatry.

WALTER JOHANNES SIEMSEN, M.D., Instructor in Pediatrics.

KATSUJI KATO, M.D., Ph.D., Instructor in Pediatrics.

DOUGLAS N. BUCHANAN, A.M., Instructor in Pediatrics.

ARTHUR R. TURNER, A.B., M.D., Instructor in Pediatrics.

MINERVA MORSE, Ph.D., Research Associate in Pediatrics, Douglas Smith Foundation.

VERNON DEYOUNG, M.D., Assistant and Assistant Resident in Pediatrics.

DOROTHY FETTER, Ph.D., Research Assistant in Pediatrics, Christian Hansen Laboratory Research Fund.

ROSS W. WEISIGER, M.D., Assistant and Assistant Resident in Pediatrics.

INTRODUCTORY

The Department of Pediatrics, as now organized, represents the fields of general pediatrics, preventive pediatrics, and contagious diseases. Instruction in all these fields will be offered during the academic year 1933-34.

The Department is located in the Bobs Roberts Memorial Hospital for Children, which houses the in-patient and out-patient services of the Pediatric Clinic, the preventive pediatric welfare stations, and all the research laboratories and facilities available to the Department for scientific investigations in these fields.

The pediatric material of the in- and out-patient services of the Provident Hospital, the Children's Memorial Hospital, and the Country Home for Convalescent Children are, to some extent, available to the Department as teaching material.

The entire newly-born service of the Department of Obstetrics has, by consent of that staff, been placed in charge of the Pediatric Department and is cared for at the Lying-in Hospital by the Pediatric Staff.

Instruction in contagious diseases is, at present, given in the Municipal Contagious Disease Hospital, supplemented by didactic lectures in Conjoint Clinical Course 350.

RESEARCH

Properly qualified students are offered every opportunity for research work, and a limited number of residencies and assistant residencies are available in the Department. Applicants for the residencies must have the degree of Doctor of Medicine and have had at least one year of pediatric internship.

FELLOWSHIPS

Some fellowships for research in Pediatrics are open to suitably qualified students. They provide a stipend and the expense of the research and are open only to graduate students with, or without, the degree of Doctor of Medicine. The applicant must be recommended by the Chairman of the Department.

DEGREES

THE DEGREE OF MASTER OF SCIENCE AND DOCTOR OF PHILOSOPHY

Properly qualified candidates may be eligible for the higher degrees of Master of Science or Doctor of Philosophy.

The degree of Master of Science, or of Doctor of Philosophy, will be recommended only for students who have submitted a thesis embodying original research in the field of Pediatrics, approved by the Department of Pediatrics and the Dean of the Division of Biological Sciences, and who have completed satisfactorily an amount of advanced work equivalent to that required for the degree of Master of Science, or Doctor of Philosophy, as required by the Division of the Biological Sciences.

THE DEGREE OF DOCTOR OF MEDICINE

All candidates for the degree of Doctor of Medicine are required to complete a minimum of $1\frac{1}{2}$ courses in Pediatrics. In addition a half-course must be taken in contagious diseases, which is given conjointly with the Department of Medicine. Written, practical, and oral examinations must be satisfactorily completed. Candidates for the degree of Doctor of Medicine with honors in Pediatrics are subject to the requirements of the Division of Biological Sciences governing such degrees.

COURSES OF INSTRUCTION

The unit of instruction is a "course."

Conjoint Clinical Course 301. Introductory Course.—(See page 28.)

Conjoint Clinical Course 302.—(See page 28.)

Conjoint Clinical Course 350.—(See page 28.)

303. Pediatric Externship.—Students are assigned to hospital service and out-patient department for 3 weeks each. Limited to 6. This course includes work in Course 352. $1\frac{1}{2}$ Courses. Daily, 9:00–5:00. Offered each quarter, SCHLUTZ, HAMILTON, SWANSON, AND STAFF.

304. Externship in Out-Patient Department.—General pediatrics and therapeutic procedures. Limited to 6. It is recommended that students take at least 1 course in this work. Each quarter. 2 days weekly, $\frac{1}{2}$ Course; 4 days weekly, Course; 6 days weekly, $1\frac{1}{2}$ Courses, daily, 9:00–12:00, SWANSON AND STAFF.

305. Contagious Diseases.—Instruction given at the Municipal Contagious Disease Hospital in the diagnosis and treatment of all types of contagious disorders. Limited to 7. $\frac{1}{2}$ Course. Tu., Th., 4:00–6:00, Autumn, Winter, Spring, HOYNE. Supplementary lectures by Dr. Dick and Dr. Schlutz are included in Conjoint Clinical Course 350.

306. Pediatric Psychiatry. Third Year.—Limited to 12. $\frac{1}{2}$ Course. Winter and Spring, 2 periods weekly, hours to be arranged, CHAMBERLAIN.

310. Pediatric-Roentgenology Conference.—Third- and fourth-year students. No credit. W., 5:30, each quarter, PEDIATRIC AND ROENTGENOLOGY STAFFS.

315. Clinical-Pathological Conferences.—Weekly conferences with the Department of Pathology and the clinical departments on correlation of clinical study of cases with morbid anatomy. Open to students on invitation only. No credit. F., 4:30, each quarter.

320. Clinical Conference.—Third- and fourth-year students. No credit. M., 3:00, each quarter, PEDIATRIC STAFF.

352. Preventive Pediatrics (Welfare Clinic).—Practical instruction in care and feeding of normal infants with demonstration of food preparation. Fourth year. Limited to 10. $\frac{1}{2}$ Course. Tu., Th., 2:00–5:00, each quarter, SWANSON AND STAFF.

402. Research and Advanced Work in Pediatrics.—Open to qualified students by arrangement with the Chairman of the Department. 1, 2, or 3 Courses. Hours to be arranged, SCHLUTZ, HAMILTON, SWANSON, AND STAFF.

THE DEPARTMENT OF PHYSIOLOGICAL CHEMISTRY AND PHARMACOLOGY

A. OFFICERS OF INSTRUCTION IN PHYSIOLOGICAL CHEMISTRY

FRED CONRAD KOCH, Chairman of the Department of Physiological Chemistry and Pharmacology.

FRED CONRAD KOCH, PH.D., Professor of Physiological Chemistry.

MARTIN EDWARD HANKE, PH.D., Associate Professor of Physiological Chemistry.

IDA KRAUS-RAGINS, PH.D., Instructor in Physiological Chemistry.

FELIX WADSWORTH SAUNDERS, PH.D., Instructor in Physiological Chemistry.

ELIZABETH MILLER KOCH, PH.D., Research Instructor in Physiological Chemistry.

THOMAS FRANCIS GALLAGHER, PH.D., Research Associate in Physiological Chemistry,
National Research Council Fund.

JOHN THEOBOLD HAUCH, PH.D., Assistant in Physiological Chemistry.

DAVID R. L. DUNCAN, S.B., Assistant in Physiological Chemistry.

PAUL B. DONOVAN, S.M., Assistant in Physiological Chemistry.

ABRAM AVROME BASS, S.B., Assistant in Physiological Chemistry.

MARY BRANNOCK BLAUCH, S.M., Assistant in Physiological Chemistry.

AARON BAKER KENDRICK, PH.D., Assistant in Physiological Chemistry.

OLIVER HOWE LOWRY, S.B., Assistant in Physiological Chemistry.

JOSEPH CHILDS EHRLICH, S.B., Assistant in Physiological Chemistry.

FELLOWS, 1933-34

RALPH ISADORE DORFMAN, S.B.

FRED LUDWIG HUMOLLER, S.B.

B. OFFICERS OF INSTRUCTION IN PHARMACOLOGY

EDWARD WILLIAM WALLACE, PH.D., Instructor in Pharmacology.

ZONJA WALLEN-LAWRENCE, S.B., Research Instructor in Pharmacology, John D. Hertz
Fund.

ABRAHAM MORRIS TARGOW, PH.D., Research Assistant in Pharmacology, Biological
Research Grant No. 12.

BERT JOHN VOS, JR., A.B., Assistant in Pharmacology.

RICHARD BRUNER, S.B., Assistant in Pharmacology.

INTRODUCTORY

The Department offers courses in Physiological Chemistry and Pharmacology for (a) medical students, (b) graduate students in the physical and biological sciences, and (c) those who wish advanced work in biochemistry and pharmacology in preparation for research or teaching careers in these fields.

The Department is particularly desirous of stimulating research, but only when the student has been properly prepared to do the work well. After the research is under way, the student is advised to devote practically all his time to that study rather than to take unrelated courses of instruction.

It is advisable that a student who proposes to specialize in this Department should obtain a broad scientific foundation, including work in the cognate sciences. Specifically, it is recommended that the student pursue the following courses in introduction: Physics 105, 106, 107, 111, 112, 113; Mathematics through calculus; Chemistry 104, 105, 120, 230, 240; Physiology 202, 203, 204; Zoölogy 103 or 201; Botany 101 and 102; Geology 101; in addition modern languages, one or more courses in Histology, the Comparative Anatomy of Vertebrates, and a course in Calculus.

THE BACHELOR'S DEGREE

Since Physiological Chemistry presupposes a thorough training in both chemistry and biology, it can only be studied after preparation in these other sciences. For that reason it cannot usually be undertaken before admission to the Division.

HIGHER DEGREES

THE DEGREE OF MASTER OF SCIENCE

Departmental prerequisites.—(1) Research (Courses 401, 402, or 451); (2) six graduate courses; (3) thesis; (4) take part in departmental seminar. The courses that may be counted toward the Master's degree in Physiological Chemistry are 301, 302, 303, 304, 305, 311, 315, 321, 322, 331. The courses that may be counted toward the Master's degree in Pharmacology are Physiological Chemistry 201, 202, 301, 302, 303, 304, 311, 321 and Pharmacology 251, 351, 352, 353.

Before admission to candidacy for the Master's degree in Physiological Chemistry, the student is required to prove his ability to read German and to pass a three-hour written examination in analytical, organic, and physiological chemistry, and in addition either elementary physical chemistry or physiology. The scope of this examination is covered by Chemistry 120, 221, 230, 241; Physiological Chemistry 201, 202; and either Chemistry 261 or Physiology 202, 203, 204. This examination must be taken not later than the third quarter of residence for the degree and at least two months before the degree is to be conferred. Students should plan to take this examination before beginning their research work.

Before he is accepted as a candidate for the Master's degree in Pharmacology, the student is required to pass a three-hour written examination in Physiological Chemistry, Physiology, and Pharmacology. The scope of this examination is covered by Physiological Chemistry 201, 202; Physiology 251, 252 and Physiology 303 or Neurology; and Pharmacology 351.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Departmental prerequisites.—The departmental prerequisites for the degree of Doctor of Philosophy in Physiological Chemistry are Courses 301, 302, 303, and 304, or their equivalent, and three or four courses in special methods and preparations. In Physiology, Courses 251, 252, and 303 are suggested although the main aim is to choose only such courses in other departments as will aid the candidate in his specific research problem. A good knowledge of physical and organic chemistry and of the literature and history of physiological chemistry are also required. Main emphasis is placed, however, upon ability to conduct original and accurate research work. Candidates must take part in the seminars. Before admission to candidacy for the Doctor's degree, the student is required to prove his ability to read German and French and to pass a preliminary examination in physics, analytical, organic, physical, and physiological chemistry and physiology. The scope of this examination is covered by Physics 111, 112, 113;

Chemistry 120, 221, 230, 240, 261; Physiological Chemistry 301, 302, 303; and Physiology 251 and 252. This examination must be taken not later than the fourth quarter of residence for the degree and at least eight months before the degree is to be conferred. Students should plan to take this examination before being assigned to a research problem.

The departmental prerequisites for the degree of Doctor of Philosophy in Pharmacology are a thorough knowledge of physiology, physiological chemistry, toxicology, as well as of the history and literature of pharmacology and the completion of original research work. Candidates must take part in the seminars. Before he is accepted as a candidate, the student will be required to pass a preliminary examination. The scope of this examination is covered by Chemistry 120, 221, 230, 240, 261; Physiological Chemistry 201, 202; Physiology 251, 252, 303; and Pharmacology 351. This preliminary examination should be taken as early as possible and may not be taken later than eight months before the degree is to be conferred.

THE DEGREE OF DOCTOR OF MEDICINE

The requirements for the degree of Doctor of Medicine include (a) a minimum of four courses in the group consisting of the departments of Physiology and Physiological Chemistry and Pharmacology; (b) the successful passing of final examination in the Department of Physiological Chemistry and Pharmacology. Credit for the individual courses will be withheld until the passing of the departmental examination.

Candidates for the degree of Doctor of Medicine with honors in Physiological Chemistry are required in addition to the work above outlined to prepare a thesis based on independent research. Such candidates are advised to take additional courses as far as possible in this Department. The student's program should be so arranged that the research problem will extend over a period of three or more quarters. The candidate should also take part in the departmental seminars.

A. COURSES OF INSTRUCTION IN PHYSIOLOGICAL CHEMISTRY

The unit of instruction is a "course."

201. Chemistry of Cell Constituents.—First required course for medical or undergraduate students. Chemistry of the carbohydrates, lipins, proteins, etc. Prerequisite: General and organic chemistry, qualitative and quantitative analysis. $\frac{3}{4}$ Course. Autumn, lectures: M., Tu., W., 8:00; laboratory: F., *sec. a*: 8:00–12:00; *sec. b*: 1:30–5:30, KOCH, SAUNDERS, KRAUS-RAGINS; Summer, 1934, one section, HANKE, SAUNDERS, KRAUS-RAGINS.

202. Chemistry of Digestion, Metabolism, and Excretion.—Second required course for medical and undergraduate students. Prerequisite: Physiological Chemistry 201. $\frac{3}{4}$ Course. Spring, University College, one section, KOCH; Winter: lectures: M., Tu., W., 8:00; laboratory: F., *sec. a*: 8:00–12:00; *sec. b*: 1:30–5:30, KOCH, HANKE, SAUNDERS, KRAUS-RAGINS; Summer, 1934, one section, HANKE, SAUNDERS, KRAUS-RAGINS.

301. Hydrogen-Ion Activity and the Chemistry of Carbohydrates and Lipins.—Graduate course for students who wish to take advanced work in Physiological Chemistry and for medical students who wish to emphasize the chemical aspect in their training. Prerequisite: Quantitative analysis, physical chemistry, and organic chemistry, i.e., Chemistry 120 and 221 or their equivalent. Autumn, lectures: M., Th., F., 1:30; laboratory: Tu., W., 1:30–4:30, KOCH, SAUNDERS, KRAUS-RAGINS; Summer, 1934, HANKE, SAUNDERS, KRAUS-RAGINS.

302. Chemistry of Proteins and Digestion.—An advanced course including detailed considerations of proteins, enzymes, and digestion. Prerequisite: Physiological Chemistry 301. Winter, lectures: M., Th., F., 1:30; laboratory: Tu., W., 1:30–4:30, KOCH,

HANKE, SAUNDERS, KRAUS-RAGINS; Summer, 1935, HANKE, SAUNDERS, KRAUS-RAGINS.

303. Chemistry of Metabolism.—An advanced course covering intermediary metabolism, internal secretions, vitamins, and excretions. Prerequisite: Physiological Chemistry 301 and 302. Spring, lectures: M., Th., F., 1:30; laboratory: Tu., W., 1:30-4:30, KOCH, HANKE, SAUNDERS; Summer, 1936.

304. Physico-chemical Methods Applied to Biochemical Problems.—The theoretical discussion and practical application of various physico-chemical methods and considerations. Prerequisite: Physiological Chemistry 201 and 202 and Physical Chemistry. Winter, Summer, HANKE.

305. Chemistry of Colloidal State.—Theoretical consideration and practical applications on the colloidal state of cell constituents. Prerequisite: Physiological Chemistry 201, 202, and 304. *Course* or $\frac{1}{2}$ *Course*. Spring, SAUNDERS.

311. Advanced Blood and Urine Microchemical Methods.—A critical lecture and laboratory treatment of various methods and the significance of the results. Prerequisite: Physiological Chemistry 202 or 303. *Course* or $\frac{1}{2}$ *Course*. Spring, Summer, KOCH.

315. The Quantitative Analysis of Proteins.—Practical work with modern revisions of standard methods. Prerequisite: Physiological Chemistry 202 or 302. Summer, Winter, Spring, KRAUS-RAGINS, SAUNDERS.

321. Biochemical Preparations.—Prerequisite: Physiological Chemistry 201 or 301. Every quarter.

322. Biochemical Preparations.—Prerequisite: Physiological Chemistry 321. Every quarter.

331. The Biochemistry of Internal Secretions.—A lecture course. Prerequisite: Physiological Chemistry 201 and 202; or 301, 302, and 303. Three lectures per week. $\frac{1}{2}$ *Course*. Summer, KOCH.

401. Research in Physiological Chemistry.—Every quarter, KOCH, HANKE, KRAUS-RAGINS, AND SAUNDERS.

402. Research in the Physico-chemical Aspects of Physiological Chemistry.—Every quarter, HANKE, SAUNDERS.

410. Seminar in Biochemistry and Pharmacology.—A joint seminar with the Department of Physiology for the presentation of research reports. Every quarter, weekly one hour, all members of the different staffs.

B. COURSES OF INSTRUCTION IN PHARMACOLOGY

251. Toxicology and Prescription-Writing.—Discussion of prescription-writing and of drugs which are not readily adapted to laboratory demonstration. In the laboratory certain drugs and poisons are detected by pharmacological and chemical means. Prerequisite: Physiological Chemistry 201. *Course* or $\frac{1}{2}$ *Course*. Autumn, WALLACE.

351. Pharmacology.—The physiological analysis and interpretation of the mode of action of the more important drugs. Prerequisite: Physiological Chemistry 201, 202 and Physiology 251, 252, and 303. Pharmacology 251 is desirable. *Course*. Winter, 1934, Lectures: M., Tu., W., 9:00; Laboratory: *Sec. a*, Th., F., 8:00-11:00; *Sec. b*, Th., F., 1:30-4:30; Summer, 1934, Lectures: M., Tu., W., 8:00; Laboratory: Th., F., 8:00-11:00; Spring, 1935, Lectures: M., Tu., W., Th., 8:00 for the first 5 weeks, and M., Tu., W., the remaining 3 weeks; Laboratory: *Sec. a*, F., 8:00-12:00 for 8 weeks; *Sec. b*, F., 1:30-5:30 for 8 weeks; and *Sec. a*, Th., 8:00-12:00 for the sixth, seventh, and eighth weeks; *Sec. b*, Th., 1:30-5:30 the sixth, seventh, and eighth weeks. WALLACE AND ASSISTANTS.

352. Special Problems in Pharmacology.—Advanced and more independent laboratory instruction. Prerequisite: Pharmacology 351. Summer, Autumn, Winter, WALLACE.

353. Biological Assay.—The theoretical and practical treatment of the biological assay of a drug, internal secretion, or vitamin. Prerequisite: Physiological Chemistry 201 and 202 or Pharmacology 351, depending upon the interest of the student. Autumn, WALLACE AND OTHER MEMBERS OF THE STAFF.

451. Research in Pharmacology.—Every quarter, WALLACE, KOCH.

THE DEPARTMENT OF PHYSIOLOGY

OFFICERS OF INSTRUCTION

ANTON JULIUS CARLSON, Chairman of the Department of Physiology.

NATHANIEL KLEITMAN, Secretary of the Department.

ANTON JULIUS CARLSON, PH.D., M.D., LL.D., Frank P. Hixon Distinguished Service Professor of Physiology.

ARNO BENEDICT LUCKHARDT, PH.D., M.D., Professor of Physiology.

RALPH STAYNER LILLIE, PH.D., Professor of Physiology.

ALBERT BAIRD HASTINGS, PH.D., Professor of Physiology.

FRANKLIN CHAMBERS MCLEAN, PH.D., M.D., Professor of Pathological Physiology.

NATHANIEL KLEITMAN, PH.D., Associate Professor of Physiology.

RALPH WALDO GERARD, PH.D., M.D., Associate Professor of Physiology.

HEINRICH NECHELES, M.D., PH.D., Assistant Professor of Physiology.

EUGENE UPDYKE STILL, PH.D., Assistant Professor of Physiology.

EDMUND JACOBSON, PH.D., M.D., Assistant Professor of Physiology.

LOUIS NELSON KATZ, A.M., M.D., Assistant Professor of Physiology.

SAMUEL SOSKIN, M.D., PH.D., Assistant Professor of Physiology.

VICTOR E. JOHNSON, PH.D., Instructor in Physiology.

ALMA FOGELBERG, S.B., Assistant in Physiology.

ROBERT A. COHEN, S.B., Assistant in Physiology.

ABRAHAM J. KOSMAN, A.B., Research Assistant in Physiology.

WADE H. MARSHALL, S.B., Research Assistant in Physiology.

EDWIN S. FETCHER, S.B., Research Assistant in Physiology.

ARTHUR LAWRENCE BENNETT, A.B., Assistant in Physiology.

ALEXANDER M. RISKIN, A.B., Assistant in Physiology.

DAVID JUDSON LINGLE, PH.D., Associate Professor Emeritus of Physiology

FELLOWS, 1933-34

JAMES F. REGAN, PH.D., Donnelley Fellow in Physiology.

JOHN J. WESTRA, PH.D., Donnelley Fellow in Physiology.

BRODA O. BARNES, PH.D., Seymour Coman Fellow.

ARNOLD LIEBERMAN, PH.D., M.D., Sandoz Fellow.

ROY ROSS RISK, M.D., Seymour Coman Fellow in Physiology.

LOUISE HANSON, Adolph Sutro Fellow (Vassar).

NORRIS L. BROOKENS, S.B.

NORMAN ROY COOPERMAN, S.M.

FRANCIS JOSEPH MULLIN, S.M.

EUGENE DE SAVITSCH, A.B.

INTRODUCTORY

The courses of the Department of Physiology are arranged for four classes of students:

I. Students in the College and Divisions who desire some knowledge of human physiology, foods, and personal hygiene as an educational equipment for life.

II. Students in the Divisions who wish to acquire a more extensive knowledge of the structure and functions of the human body, or who wish to study biology from the physiological side. To satisfy the needs of these students and enable them to cover the subject satisfactorily, a three-major course is given: Courses 202, 203, and 204, Introductory Physiology.

III. Students wishing to specialize in Physiology, or students of other biological sciences who wish to take minor work in advanced Physiology.

IV. Medical students.

THE BACHELOR'S DEGREE

On admission to the Division, each student specializing in the Department will arrange, in consultation with the Departmental Counselor, a progressive, sequential program of approximately 12 courses in the Department or in the Department and related departments in addition to those completed in the College.

The required courses in the Department are 202 or 203, 204, 251, and 252. With the approval of the Counselor, courses may be selected from the following: Psychology 111; Chemistry 240, 261; Physiological Chemistry 201, 302; Botany 120; Anatomy 311; Zoölogy 220, 301, 319; Bacteriology 201.

HIGHER DEGREES

THE DEGREE OF MASTER OF SCIENCE

Departmental prerequisite.—(1) Research, at least 3 courses (Course 411); (2) 2-5 courses from the courses numbered 300 or higher in Physiology and related sciences (Courses 251, 252 may be counted in these 5 courses); (3) thesis.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Departmental prerequisites.—Courses 251, 252, 303, and Physiological Chemistry 201 and 302, or their equivalents, and 2-4 additional courses in the 300-400 group in Physiology and Physiological Chemistry are required of all candidates for the Doctor's degree. The candidate must also participate in the weekly seminar in the Physiology group. The further selection of work is arranged in each case by consultation. The student must pass a qualifying examination in the general field of physiology before the departmental recommendation for the candidacy is granted.

THE DEGREE OF DOCTOR OF MEDICINE

Four courses of work in the departments of Physiology, Physiological Chemistry, and Pharmacology is the minimum requirement of all candidates for the degree of Doctor of Medicine. For these candidates practical, written, and oral examinations covering the subject matter of Physiology 251, 252, and 303 will be offered during the Winter Quarter.

A candidate for the degree of Doctor of Medicine who elects to do research leading to a thesis in the Department of Physiology will be guided in the selection and experimental development of his research problem.

Courses 202, 203, and 204 are intended for college students who aim to secure a more detailed and comprehensive knowledge of physiology. These courses prepare the student for advanced work in physiology and are useful to students who intend to specialize in other branches of biology. Course 203 is particularly helpful to students in Home Economics.

COURSES OF INSTRUCTION

The unit of instruction is a "course."

COURSE IN THE COLLEGE

101. Physiology.—Spring, *Sec. a*, 10:00–12:00; *Sec. b*, 1:30–3:30, CARLSON, LUCKHART, KLEITMAN, GERARD.

102. Physiology of the Human Body.—An introductory and elementary course covering the main facts and important recent advances in human physiology, primarily for undergraduate students who desire this knowledge, but who are unable to devote more of their college time to this subject. University College, Autumn, Winter, MEMBERS OF THE STAFF.

COURSES IN THE DIVISION

Courses 202, 203, and 204 are intended for students who aim to secure a more detailed and comprehensive knowledge of physiology. These courses prepare the student for advanced work in physiology and are useful to students who intend to specialize in other branches of biology. Course 203 is particularly helpful to students in Home Economics.

202. Physiology of Muscle, Nerve, Reflexes, Blood, and Circulation.—Prerequisite: Physics 102, Chemistry 101. Summer, lecture: W., Th., F., 1:30; laboratory: M., Tu., 1:30–3:30. Autumn, lecture: M., W., Th., 1:30; laboratory: M., W., 2:30–4:30, KLEITMAN AND ASSISTANT.

203. Physiology of Respiration, Digestion, Secretion, Absorption, and Metabolism.—Prerequisite: Physics 102, Chemistry 101. Winter, lecture: M., W., Th., 1:30; laboratory: M., W., 2:30–4:30, KLEITMAN AND ASSISTANT.

204. Physiology of Central Nervous System, Special Senses, Internal Secretion, and Reproduction.—(Not given in 1933–34.)

205. Undergraduate Honors Course in Physiology.—An introduction to research. Prerequisite: Physiology 202, 203, 204 or equivalents, and consent of instructor. Each quarter, hours to be arranged, KLEITMAN.

210. Introduction to Research.—An honors course for undergraduate students. Registration by consent of instructors. Autumn, Winter, Spring, hours to be arranged, KLEITMAN, GERARD.

***251. Physiology of Blood, Circulation, and Respiration.**—Lectures and recitations, 3 hours a week; laboratory work, 6 hours a week. Prerequisite: Physiology 202 or equivalent. Summer, Spring, lecture: W., Th., F., 11:00; laboratory: M., Tu., 9:00–12:00, CARLSON AND ASSISTANTS.

***252. Physiology of Digestion, Metabolism, Absorption, Secretion, Excretion, Muscles, and Heat.**—Lectures and recitations, 3 hours a week; laboratory, 6 hours a week. Prerequisite: Physiological Chemistry 201, Physiology 251. Summer, lecture: M., Tu., W., 8:00; laboratory: Th., F., 8:00–11:00, Autumn, lecture: M., Tu., W., 9:00; laboratory: *sec. a*: Th., F., 8:00–11:00; *sec. b*: Th., F., 1:30–4:30, LUCKHARDT, STILL, AND ASSISTANTS.

***303. Physiology of the Nervous System and the Senses.**—Lectures, two a week; recitation and conference, one a week; laboratory, 6 hours a week. Prerequisite: Anatomy 317 and Physiology 251. Summer, lecture: M., Tu., W., 1:30; laboratory: Th., F., 2:30–5:30, KLEITMAN AND ASSISTANTS; Winter, lecture: M., Tu., W., 8:00; laboratory: *sec. a*: Th., F., 8:00–11:00; *sec. b*: Th., F., 1:30–4:30, LUCKHARDT, KLEITMAN, AND ASSISTANTS.

304. Special Physiology of Mammals.—Including the experiments not given in the general courses. Prerequisite: Physiology 251, 252, or 303, or equivalent. $\frac{1}{2}$ Course, 1:30–5:30, Winter, LUCKHARDT.

* Courses 251, 252, and 303 will be repeated in the Summer Quarter, 1933. Beginning with the Spring Quarter, 1934, these 3 courses will be condensed to 2 courses given in Spring and Autumn, respectively

305. The Principles of Physiology.—As they are applied to the clinical examination of the central nervous system and special senses. Laboratory work limited to ten students; registration for laboratory by conference with instructor. $\frac{1}{2}$ *Course* or *Course*, hours to be arranged, Spring, LUCKHARDT.

307. Principles and Problems of Human Nutrition and Dietetics.—Prerequisite: Physiology 252. Laboratory work limited to ten students; registration for laboratory by conference with instructor. Summer, Autumn, hours to be arranged, STILL.

308. Applied Physiology of the Circulation.—Mechanics of the circulation; the electrocardiogram; sphygmography; sphygmomanometry; pathological physiology of the heart and blood vessels. One phase of the subject will be considered each quarter. Lectures and conferences, 2 hours a week. Prerequisite: Physiology 251. $\frac{1}{2}$ *Course*, Winter, lecture: Tu., F., 4:30; Spring, lecture: Th., F., 4:30, KATZ.

312. Advanced Physiology of the Nervous System, Chronaxie, Conditioned Reflexes, Sleep.—Prerequisite: Physiology 303. $\frac{1}{2}$ *Course* or *Course*, Autumn, hours to be arranged, KLEITMAN.

401. Advanced Physiology of the Gastrointestinal Tract.—Hours to be arranged, STILL.

403, 404. General Physiology.—Properties and physico-chemical constitution of living matter. Influence of chemical and physical agents on protoplasm. Nature and conditions of protoplasmic response. Prerequisite: Inorganic and Organic Chemistry, General Physics, General Zoölogy or Botany, Introductory Physiology. 3 *Courses*, Autumn, lecture: M., F., 2:30–4:00; laboratory: M., F., S., 9:00–12:00, Winter, lecture: M., F., 2:30–4:00; laboratory: M., F., S., 9:00–12:00, LILLIE AND ASSISTANTS.

405. Problems in Cell Metabolism.—Registration by consent of instructor. $\frac{1}{2}$ *Course*, Spring, hours to be arranged, GERARD.

407. Special Physiology of the Glands of Internal Secretion.—Laboratory work limited to ten students; registration for laboratory by conference with instructor. $\frac{1}{2}$ *Course* or *Course*, Summer, Winter, hours to be arranged, CARLSON, LUCKHARDT, AND ASSISTANTS.

409. Seminar in Physiology Group.—Weekly. No credit. Summer, Autumn, Winter, Spring, hours to be arranged, CARLSON, LUCKHARDT, KOCH, LILLIE, KLEITMAN, HANKE, GERARD, STILL.

411. Research in Physiology.—Each quarter, hours to be arranged, CARLSON, LUCKHARDT, KLEITMAN, GERARD, STILL, JOHNSON.

413. Research in General Physiology.—Autumn, Winter, Spring, hours to be arranged, LILLIE, GERARD.

THE DEPARTMENT OF SURGERY

OFFICERS OF INSTRUCTION

DALLAS B. PHEMISTER, Chairman of the Department of Surgery.

GENERAL SURGERY

DALLAS B. PHEMISTER, M.D., Professor of Surgery.

EDMUND ANDREWS, M.D., Professor of Surgery.

LESTER REYNOLD DRAGSTEDT, Ph.D., M.D., Professor of Surgery.

ALEXANDER BRUNSCHWIG, M.D., Assistant Professor of Surgery, Resident.

HILGER PERRY JENKINS, M.D., Assistant Professor of Surgery.

WILLIAM ELIAS ADAMS, M.D., Instructor in Surgery, Chief Resident.

HAROLD S. BOWMAN, M.D., Assistant in Surgery.

FREDERICK EVERT KREDEL, S.M., M.D., Assistant in Surgery, Assistant Resident.

WARREN BOND MATTHEWS, M.D., Assistant in Surgery.

NORMAN ROOME, M.D., Assistant in Surgery.

HENRY NELSON HARKINS, M.D., Ph.D., Research Assistant in Surgery, Douglas Smith Foundation.

HARWELL WILSON, M.D., Research Assistant in Surgery, Douglas Smith Foundation

ALBERT A. DAHLBERG, D.D.S., Assistant in Surgery (dental), and Assistant Resident.

NEUROSURGERY

PERCIVAL BAILEY, Ph.D., M.D., Professor of Surgery.

PAUL CLANCY BUCY, M.D., Assistant Professor of Surgery.

ARTHUR EARL WALKER, M.D., Assistant in Surgery; Assistant Resident.

OPHTHALMOLOGY

EDWARD VAIL LAPHAM BROWN, M.D., Professor of Surgery.

LOUIS BOTHMAN, M.D., Associate Clinical Professor of Surgery.

DEWEY KATZ, S.B., M.D., Assistant Professor of Surgery.

JOHN TROW STOUGH, A.B., M.D., Instructor in Surgery, Resident.

CLARISSA E. DEVNEY, S.B., M.D., Instructor in Surgery.

DAVID ROLF, M.D., Assistant in Surgery.

WILLIAM M. JONES, M.D., Assistant in Surgery.

RUBY KATHRYN DANIELS, M.D., Assistant in Surgery, Assistant Resident.

ORTHOPEDIC SURGERY

EDWARD LYON COMPERE, M.D., Assistant Professor of Surgery.

CLY HOWARD HATCHER, M.D., Instructor in Surgery.

DONALD CHAUNCEY KEYES, M.D., Instructor in Surgery, Resident.

PAUL HARDEN HARMON, M.D., Assistant in Surgery, Assistant Resident.

JEROME TYRRELL JEROME, M.D., Assistant in Surgery, Assistant Resident.

ARTHUR D. BISSELL, M.D., Research Assistant in Surgery, Douglas Smith Foundation.

GRAHAM KERNWEIN, S.B., M.D., Assistant in Surgery, Assistant Resident.

JOHN KUHN, M.D., Assistant in Surgery, Assistant Resident.

H. RALSTON MCCARROLL, M.D., Assistant in Surgery, Assistant Resident.

PAUL E. McMASTER, M.D., Assistant in Surgery, Assistant Resident.

OTOLARYNGOLOGY

JOHN RALSTON LINDSAY, M.D., Associate Professor of Surgery.
GORDON HILBERT SCOTT, M.D., Assistant Professor of Surgery.
THEODORE EDWIN WALSH, M.D., Assistant Professor of Surgery.
HENRY B. PERLMAN, M.D., Instructor in Surgery.

UROLOGY

CHARLES BRENTON HUGGINS, M.D., Associate Professor of Surgery.
HAROLD EVEREST HAYMOND, S.B., M.D., Assistant in Surgery, Assistant Resident.

ANESTHESIA

HUBERTA LIVINGSTONE, M.D., Instructor in Surgery.

INTRODUCTORY

The instruction is given in the form of an introductory course, an externship in the hospital, clerkships in the Out-Patient Department, amphitheater clinics, and advanced work in the special fields of general surgery and in the surgical specialties. Opportunities are offered qualified students for research work and a limited number of internships, assistant residencies, and residencies are available in general survey and in the surgical specialties.

DEGREES

THE DEGREE OF DOCTOR OF MEDICINE

All candidates for the degree of Doctor of Medicine are required to complete a minimum of 5 courses in general surgery and the surgical specialties and to pass a general examination in General Surgery, Urology, Orthopedics, Otolaryngology, and Ophthalmology. Examinations will be offered during the second half of each quarter. Candidates for the M.D. degree with honors in surgery are required in addition to prepare a satisfactory thesis based on independent research and constituting an actual contribution to knowledge.

THE DEGREE OF MASTER OF SCIENCE

The Degree of Master of Science will be granted in the Department of Surgery upon the fulfilment of the following requirements: residence for at least three quarters subsequent to the granting of the four-year certificate or its equivalent; 8 courses of satisfactory grade level, six of which shall be done in the University of Chicago; a satisfactory dissertation approved by the Chairman of the Department; and a satisfactory examination in some special field of surgery. Work as an undergraduate extern or intern or as resident shall not be counted toward the degree of Master of Science. Candidates who have active clinical responsibilities, such as residents, shall not be permitted to register for more than one course a quarter toward this degree.

THE DEGREE OF DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy in Surgery will be recommended only for students who have completed the work required for the degree of Doctor of Medicine, and who have submitted a thesis embodying original research approved by the Department of Surgery and who have completed satisfactorily an amount of advanced work equivalent to that required for the degree of Doctor of Philosophy in the Division of the Biological Science.

FELLOWSHIPS

Fellowships from the Douglas Smith Foundation, the Lasker Foundation, and the Frank G. Logan Fellowship Fund may be awarded to properly qualified candidates for research work in the Department of Surgery.

COURSES OF INSTRUCTION

The unit of instruction is a "course."

I. GENERAL SURGERY, ORTHOPEDICS, AND UROLOGY

Conjoint Clinical Course 301. Introductory Course.—(See page 28.)

Conjoint Clinical Course 302.—(See page 28.)

303. Externship in Hospital.—The student works full time for one quarter as a member of a team responsible for the care of patients and for the investigation of disease. In the forenoons the student is engaged in ward rounds, assisting at operations, administration of anesthetics, and history-taking. Rounds are made three mornings weekly in General Surgery and one morning each in Orthopedics, Neurosurgery, and Genito-urinary Surgery. Twelve to one daily is spent at the conjoint clinical lectures. The afternoon work includes surgical pathology, history-taking, laboratory work, and assisting at dressings. Includes $\frac{1}{2}$ course credit in therapeutics. Prerequisite: Pathology 302. *2 $\frac{1}{2}$ Courses.* Each quarter, ADAMS, ANDREWS, BUCY, BROWN, BRUNTSCHWIG, COMPERE, DRAGSTEDT, HATCHER, HUGGINS, JENKINS, KEYES, PHEMISTER.

304. Externship in Out-Patient Department in General Surgery, Orthopedics, and Genito-urinary Surgery.—Prerequisites: Surgery 303 or Medicine 303 or Obstetrics and Pediatrics 303. Under supervision the student participates in the diagnosis and treatment of conditions presented by ambulatory patients. He rotates through General Surgery, Orthopedics, and Urology. This includes Conjoint Course 350. $\frac{1}{2}$ Course, each quarter, Group A: M., W., F., 2:00–4:30; Group B: Tu., 2:00–4:30; and Sat., 10:00–12:00.

307. Ward Visits with Externs.—Prerequisite: Consent of instructor. $\frac{1}{2}$ Course, Autumn, Winter, Spring, 8:00–9:00, M., W., F.; 9:00–10:00, Tu., Th., S., PHEMISTER AND STAFF.

Conjoint Clinical Course 350.—(See page 28.)

351. Surgical Anatomy and Operative Surgery on Cadavers and Dogs.—Two two-hour periods weekly. Prerequisite: Surgery 303. $\frac{1}{2}$ Course, Summer, Winter, JENKINS BRUNTSCHWIG.

352. Physiotherapy.—For seniors. Limited to 6. 1 hour, 3 days weekly. 2:00–3:00 P.M. COMPERE AND STAFF.

356. Advanced Work in Various Fields of General Surgery.—Prerequisite: Consent of instructor. $\frac{1}{2}$ Course–Double Course, each quarter, ANDREWS, COMPERE, DRAGSTEDT, HUGGINS, PHEMISTER.

357. Advanced Work in Surgical Pathology.—Limited to seniors. Hours to be arranged. BRUNTSCHWIG.

402. Research in Surgery.—Course–3 Courses, each quarter, ANDREWS, COMPERE DRAGSTEDT, HUGGINS, PHEMISTER.

411. Seminar.—Weekly. No credit.

II. OPHTHALMOLOGY

311. Externship in Ophthalmology.—A lecture, laboratory, and clinical course. This includes theoretical and clinical work and the study and drawing of prepared specimens. Each quarter. $\frac{3}{4}$ Course. M.–F., for 1 term, 9:00–12:00, BROWN, BOTHMAN, KRONFELD, KATZ STOUGH.

353. Special Pathology of the Eye.—Designed for ophthalmologists. This course consists of three parts: (1) lectures on the pathogenesis of eye diseases; (2) study of pathological specimens illustrating principles; and (3) the correlation of clinical and postmortem findings. 4 hours weekly. $\frac{1}{2}$ Course, each quarter, BROWN.

355. Medical Ophthalmology.—Designed to meet the needs of consultants, especially in the fields of Internal Medicine, Neurology, and Pediatrics. To be given daily in the wards of the hospital. 4 hours weekly. $\frac{1}{2}$ Course, KATZ.

403. Research in Ophthalmology.—This may be undertaken on morphologic problems under Dr. Brown, on physiological problems under Dr. Bothman, and in biochemical problems under Dr. Kronfeld. 1-3 Courses, each quarter.

412. Seminar.—Weekly, F., BROWN.

III. OTOLARYNGOLOGY

321. Externship in Otolaryngology.—A lecture, laboratory and clinical course. M.-F. for 1 term, 9:00-12:00. OPD, $\frac{3}{4}$ Course, each quarter, LINDSAY AND STAFF.

357. Advanced Work in Otolaryngology.—Includes special pathology and clinical problems. Prerequisite: Consent of instructor. $\frac{1}{2}$ Course-Double Course, each quarter, LINDSAY, SCOTT, WALSH.

404. Research in Otolaryngology.—1-3 Courses, LINDSAY, SCOTT, WALSH.

IV. NEUROLOGY AND NEUROSURGERY

Conjoint Clinical Course 301.—(See page 28.)

Conjoint Clinical Course 350.—(See page 28.)

Clinical Lectures 302.—Includes Neuropathology during the Winter Quarter.

303. Externship in Hospital.—Students make daily rounds with chief of the service. They are assigned to patients and present their histories for discussion and criticism at these periods. BAILEY AND STAFF.

331. Externship in Out Patient Department.—Limited to 8. Prerequisite: 3 courses of Medicine 323 or equivalent. Summer, Autumn, Winter, Spring, M., Tu., Th., F., BAILEY, POLJAK, BUCY, BUCHANAN.

363. Advanced Neurology.—10, 20, or 30 hours a week. 1-3 Courses. BAILEY, POLJAK, BUCY.

416. Research in Diseases of the Nervous System.—Open to qualified students, by arrangement with the chief of the section. 1-3 Courses a quarter. BAILEY, POLJAK, BUCY.

THE DEPARTMENT OF ZOÖLOGY

OFFICERS OF INSTRUCTION

CHARLES MANNING CHILD, Chairman of the Department of Zoölogy.

WARDER CLYDE ALLEE, Secretary of the Department.

FRANK RATTRAY LILLIE, Ph.D., Sc.D., Professor of Embryology.

CHARLES MANNING CHILD, Ph.D., Sc.D., Professor of Zoölogy.

HORATIO HACKETT NEWMAN, Ph.D., Professor of Zoölogy.

WARDER CLYDE ALLEE, Ph.D., Professor of Zoölogy.

CARL RICHARD MOORE, Ph.D., Professor of Zoölogy.

SEWALL WRIGHT, Sc.D., Professor of Zoölogy.

ALFRED EDWARDS EMERSON, Ph.D., Associate Professor of Zoölogy.

PAUL WEISS, Ph.D., Assistant Professor of Zoölogy.

HERLUF H. STRANDSKOV, Ph.D., Instructor in General Biology.

DONALD ALLEN BOYER, S.B., Instructor in General Biology.

RALPH MORRIS BUCHSBAUM, Ph.D., Instructor in General Biology.

MARY JUHN, Ph.D., Research Associate in Zoölogy.

LINCOLN VALENTINE DOMM, Ph.D., Research Associate in Zoölogy.

YISAMU WATANABE, S.M., Rig., Research Assistant in Zoölogy.

DOROTHY PRICE, S.B., Research Assistant in Zoölogy.

RALPH OESTING, A.B., Research Assistant in Zoölogy.

RALPH H. MASURE, S.B., Research Assistant in Zoölogy.

GERTRUDE EVANS, A.B., Research Assistant in Zoölogy.

EARL A. DENNIS, S.M., Assistant in Zoölogy.

WILLIAM ETKIN, S.M., Assistant in Zoölogy.

JAMES A. MILLER, A.B., Assistant in Zoölogy.

JOHN PAUL SCOTT, A.B., Assistant in Zoölogy.

HENRY F. STROHECKER, A.B., Assistant in Zoölogy.

MARY TALBOT, A.M., Assistant in Zoölogy.

GRACE TOWNSEND, A.M., Assistant in Zoölogy.

FELLOWS, 1933-34

GERALD OLIN RULON, S.M.

WILLIAM LAWSON RUSSELL, A.B.

MILDRED SHAFFER, S.B.

MOSES ZALESKY, S.B.

MEMBER OF ANOTHER DEPARTMENT OFFERING COURSES IN THE DEPARTMENT OF ZOÖLOGY

ALFRED SHERWOOD ROMER, Ph.D., Professor of Vertebrate Paleontology.

INTRODUCTORY

The courses in Zoölogy are intended to meet the needs of those students who desire to obtain some knowledge of Zoölogy as part of their general education, those who need work in Zoölogy to satisfy the requirements of other departments, and those who propose to specialize in Zoölogy.

It is advisable that students who propose to *specialize* in Zoölogy should obtain a broad scientific foundation, including work in the cognate sciences, and a reading knowledge of French and German. More specifically, students specializing in Zoölogy should have training equivalent to 4 or 5 courses in Chemistry, 2 or 3 in Physics, and 1 or 2 in Geology; they should also obtain knowledge of the general principles of Microscopical Anatomy, Paleontology, Botany, and Physiology. These courses may be taken concurrently with the work in Zoölogy.

THE BACHELOR'S DEGREE

Entering students without thorough high-school training in biology who expect to major in Zoölogy are advised to take the general course in Biology during their first year and the biological laboratory sequence (Botany 101, Zoölogy 101, and Physiology 101) during their second year. Entering students with thorough preparation in high-school biology are advised to enter the biological laboratory sequence immediately.

Courses 201, 202, 203, and 205 present a comprehensive survey of the animal kingdom. While these courses may be taken in any order, best results are obtained if taken as a sequence in the order indicated.

On admission to the Division, each student specializing in the Department will arrange a program in consultation with the Departmental Counselor in accordance with the divisional practice as follows: one-third of the work will be taken in Zoölogy; one-third in related departments, and one-third will be free electives. (Of this last one-third not more than one-half may be taken in Zoölogy.) The work in Zoölogy will include the following fundamental courses: Zoölogy 201, 202, 203, 205, and 207.

HIGHER DEGREES

Students proposing to be candidates for the degrees of Master of Science or of Doctor of Philosophy in Zoölogy must have training equivalent to that required for the Bachelor of Science degree in this Department.

THE DEGREE OF MASTER OF SCIENCE

Departmental prerequisites.—Nine additional courses in Zoölogy including a satisfactory thesis.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Departmental prerequisites.—(1) An examination on the fundamentals of Zoölogy before admission to candidacy; (2) 3 or 4 formal courses and 3 or more seminar courses in the Department, depending on previous preparation. The principal emphasis is placed on research, in connection with which all requirements necessary for a scholarly piece of work will be demanded.

There are a number of faculty members located in other departments of the University who are specialists in phases of Zoölogy not actively represented on the departmental staff. By consent of the department in individual cases, advanced degrees may be taken in Zoölogy with the thesis work done under the direction of certain of these men.

THE ZOÖLOGY CLUB

The Zoölogy Club holds open meetings weekly for the presentation of research results and for review and discussion of important new literature.

COURSES OF INSTRUCTION

COURSE IN THE COLLEGE

101. General Zoölogy.—Four two-hour laboratory periods and one recitation each week. Winter, *Sec. a*, 10:00–12:00; *Sec. b*, 1:30–3:30; conferences on Monday as arranged, EMERSON.

COURSES IN THE DIVISION

201. Invertebrate Zoölogy I.—Study of lower invertebrate groups, Protozoa, Porifera, Coelenterata, Plathelminthes, Nemathelminthes. Prerequisite: Zoölogy 101 or equivalent. Lectures, laboratory work, and demonstrations. Autumn, lecture: M., Tu., 9:00; laboratory: W., Th., F., 8:00–10:00, CHILD.

202. Invertebrate Zoölogy II.—Comparative anatomy, development, and phylogeny of higher invertebrate groups, Bryozoa, Brachiopoda, Echinodermata, Mollusca, Annelida. Prerequisite: Zoölogy 101 or equivalent. Winter, lecture: M., Tu., 9:00; laboratory: W., Th., F., 8:00–10:00, ———.

203. Invertebrate Zoölogy III.—Comparative anatomy, development, phylogeny, and physiology of the Arthropoda. Prerequisite: Zoölogy 101 or equivalent. Summer, lecture: 10:00; laboratory: M., Tu., W., 8:00–10:00, EMERSON; Spring, lecture: M., Tu., 9:00; laboratory: W., Th., F., 8:00–10:00, EMERSON.

205. Vertebrate Zoölogy.—Comparative anatomy, development, phylogeny of vertebrates. Prerequisite: Zoölogy 101 or equivalent. Winter, M.–F., 10:00–12:00, MOORE; Spring, lectures: W., F., 1:30; laboratory: M., Tu., Th., 1:30–3:30, NEWMAN.

207. Field Zoölogy.—An introduction to local animal life based upon classification, distribution, and natural history of representatives of the animal phyla of this region. Prerequisite: Zoölogy 101 or equivalent. Summer, Autumn, lecture: W., Th., 1:30; laboratory as arranged; field all day Sat., EMERSON.

210. Evolution, Genetics, and Eugenics.—A course dealing with the history and principles of evolution and genetics and their application to experimental evolution and eugenics. Prerequisite: 15 courses or equivalent. Autumn, lecture: Tu.–F., 10:00, NEWMAN.

220. Vertebrate Embryology (for medical students).—Birds and mammals. Lectures, demonstrations, and laboratory work. Prerequisite: Zoölogy 101 and 205 or their equivalents. Summer, lecture: M., Tu., 10:00; laboratory: W., Th., F., 10:00–12:00, WILLIER; Autumn, lecture: W., Th., F., 9:00; laboratory: M., Tu., 8:00–11:00, MOORE; Spring, lecture: W., Th., F., 9:00; laboratory: M., Tu., 8:00–11:00, ———.

231. Animal Geography.—(Not given in 1933–34.)

Geology 260. Animals of the Past.—Selected topics in animal evolution. Desirable antecedents: Biological and Physical Sciences General Courses, or equivalents. Spring, 10:00, ROMER, CRONEIS.

Geology 271. Human Origins.—Man's pedigree, with particular reference to the primates and fossil human types. Winter, 11:00, ROMER.

Geology 370, 371. Vertebrate Paleontology.—The structure, evolution, classification, and faunistic relations of the vertebrates, their geologic range and distribution. Registration only after consultation with the instructor.

370. Vertebrate Paleontology, I.—Autumn, 1:30, ROMER.

371. Vertebrate Paleontology, II.—Winter, 1:30, ROMER.

372. Vertebrate Morphology.—Individual or group study of problems in vertebrate structure based upon laboratory work and readings. Prerequisite: Zoölogy 205 and 220 or equivalent. Winter, hours arranged, ROMER.

290, 291, 292, 293. Honors Course in Zoölogy.—Informal, individual supervision leading to a comprehensive examination for departmental honors. Registration only after consent of the Department and of the instructor concerned. Prerequisite: 3 courses. NEWMAN, ALLEE, WRIGHT, EMERSON.

301. Comparative Histology.—(Not given in 1933-34.)

304. Animal Ecology.—The relations between animals and their environment, illustrated by field and laboratory studies upon the nature and evolution of animal communities. Prerequisite: Zoölogy 207 or equivalent. Spring, lectures: W., Th., F., 11:00, laboratory as arranged, ALLEE, EMERSON.

305. Animal Behavior.—Analysis of animal activities with reference to the physiology and comparative psychology with particular emphasis upon invertebrates and lower vertebrates. Prerequisite: Zoölogy, 3 courses; Chemistry, 3 courses. Autumn, lecture: 2:30-3:30; laboratory: as arranged, ALLEE.

310. Fundamental Genetics.—Discussion of the mechanism of heredity. Laboratory work with *Drosophila melanogaster*. Prerequisite: Zoölogy, 101. Autumn, lecture: M., Tu., W., 9:00; laboratory: arranged, WRIGHT.

311. Biometry.—Application of statistical methods to biological problems. Types of biological frequency distributions; tests of the significance of differences, and of goodness of fit; description and interpretation of systems of interrelated variables. Prerequisite: College algebra and analytic geometry. Familiarity with the elements of differential and integral calculus is desirable. Spring, lecture: M.-Th., 10:00, WRIGHT.

312. Physiological Genetics.—Discussion of the problem of the control of life-processes by genes. Prerequisite: Zoölogy 310. Winter, lecture: M.-Th., 9:00, WRIGHT.

313. Evolution.—On the nature of the evolutionary process, the factors of evolution, and the possibilities of control. These problems are related to the theory of genetics of populations. Prerequisite: Zoölogy 310, or Botany 250 or equivalent. Spring, lecture: M.-Th., 8:00, WRIGHT.

314. Statistical Genetics.—An advanced treatment of the statistical consequences of Mendelian heredity in populations subject to various conditions. Prerequisite: Zoölogy 311, 313, and courses in differential and integral calculus. Winter, lecture: M.-Th., 11:00, WRIGHT.

318. Embryology.—The early stages of development, including maturation and fertilization of the ovum, cleavage, and the formation of the germ layers; origin of the embryo, Embryological theories. Prerequisite: Zoölogy 201, 202, 203, 205, or their equivalents. Autumn, lecture: Th., F., 10:00; conference: Tu., 11:00; laboratory: arranged, WEISS.

319. Embryology.—Continuation of 318. Later development, especially of vertebrates. A study of organ formation based upon experimental evidence. Prerequisite: Zoölogy 318, 220, or equivalent. Winter, lecture: Th., F., 10:00; conference: Tu., 11:00; laboratory: arranged, ———.

320. Physiological Zoölogy.—Laboratory work with some of the simpler animals, lectures and conferences. Primarily for advanced students of Zoölogy. Class limited. Prerequisite: Zoölogy 201, 202, 203, Chemistry 101, 102, 103, or equivalent. Autumn, lecture: Tu., Th., 4:30; laboratory: arranged, CHILD.

330. Entomology.—For advanced students who are prepared to take individual problems in entomology. Prerequisite: Zoölogy 101, 201, 202, 203, 207, or their equivalent. Autumn, hours arranged, EMERSON.

350. Problems in the Biology of Sex.—Individual instruction and investigation of special topics in the biology of sex. Prerequisite: Zoölogy 101, 205, 220, or equivalent. Registration only after consultation with instructor. Each quarter, MOORE.

360. Problems in Ecology.—Individual instruction in beginning research in laboratory, field, or library problems for advanced students. Prerequisite: Consent of instructor. Each quarter, ALLEE.

380. Problems in Genetics.—For advanced students who are prepared to undertake an individual laboratory or library problem in genetics. Prerequisite: Zoölogy 310 or equivalent. Each quarter, WRIGHT.

401. Physiology of Development.—LILLIE. (Not given in 1933-34.)

403. Individuation and Reproduction.—The organic individual and the various forms of reproduction as physiological problems. Lectures, discussion of literature. Summer, Spring, CHILD.

407. **Organic Symmetry and Twinning.**—An analysis of the basis of symmetry in organisms, of the phenomena of asymmetry and reversed symmetry, and especially of the causes and consequences of twinning. Winter, NEWMAN.

411. **Animal Aggregations.**—A study of the different types of social organization and relations of animals, their origin and effect upon the individual and the species. Autumn, M., F., 4:00-6:00; Spring, ALLEE.

422. **The Biology of Sex.**—LILLIE. (Not given in 1933-34.)

423. **Problems of Fertilization.**—LILLIE. (Not given in 1933-34.)

425. **Reproduction and Physiological Polarity.**—Various forms of reproduction in nature and experiment; physiological and physical isolation; physiological polarity in reproduction. Topics assigned. Winter, CHILD.

426. **Senescence and Rejuvenescence.**—CHILD. (Not given in 1933-34.)

430. **Physiology of Reproduction.**—Summer, MOORE. (Not given in 1933-34.)

452. **Zoölogical Problems.**—Research. At Chicago or Woods Hole. 1-3 *Courses*. Summer, STAFF.

453, 454, 455. **Zoölogical Problems.**—Research work for graduate students. Prerequisite: Training essential to the special topic undertaken. 1-3 *Courses*. Autumn, Winter, Spring, STAFF.

RELATED COURSES

Students interested in the teaching of Zoölogy should see Education 385, 386.

The attention of students of Zoölogy who are interested in parasitology is particularly called to the following course:

DEPARTMENT OF HYGIENE AND BACTERIOLOGY

320. **Parasitology.**—Summer, Autumn, HUFF.

RUSH MEDICAL COLLEGE

RUSH MEDICAL COLLEGE

OFFICERS OF INSTRUCTION

- PETER BASOE, M.D., Clinical Professor of Neurology.
ARTHUR DEAN BEVAN, A.M., M.D., Clinical Professor and Chairman of the Department of Surgery.
RALPH CRISSMAN BROWN, M.D., Clinical Professor of Medicine.
VERNON CYRENIUS DAVID, M.D., Clinical Professor of Surgery.
‡JOHN MILTON DODSON, A.M., M.D., Professor Emeritus of Medicine.
ARTHUR R. ELLIOTT, M.D., Clinical Professor of Medicine.
JAMES CORNELIUS GILL, M.D., Clinical Professor of Neurology.
CLIFFORD GROSSELLE GRULEE, A.M., M.D., LL.D., Clinical Professor and Chairman of the Department of Pediatrics.
GEORGE WASHINGTON HALL, A.M., M.D., Clinical Professor of Neurology.
NOBLE SPROAT HEANEY, A.B., M.D., Clinical Professor and Chairman of the Department of Obstetrics and Gynecology.
LUDVIG HEKTOEN, M.D., Sc.D., LL.D., Professor of Pathology.
ROBERT HARRY HERBST, M.D., Clinical Professor of Surgery (Genito-urinary).
JAMES BRYAN HERRICK, A.M., M.D., Professor Emeritus of Medicine.
ERNEST EDWARD IRONS, M.D., PH.D., Clinical Professor and Chairman of the Department of Medicine; Dean of Rush Medical College.
HERMAN LOUIS KRETSCHMER, M.D., Clinical Professor of Surgery (Genito-urinary).
SYDNEY KUH, M.D., Clinical Professor of Psychiatry.
EDWIN RAYMOND LECOUNT, M.D., Professor and Chairman of the Department of Pathology.
OLIVER SAMUEL ORMSBY, M.D., Clinical Professor and Chairman of the Department of Dermatology.
WILBER E. POST, M.D., Clinical Professor of Medicine.
THOR ROTHSTEIN, M.D., Professor Emeritus of Neurology.
GEORGE ELMER SHAMBAUGH, PH.B., M.D., Clinical Professor and Chairman of the Department of Laryngology and Otology.
SAMUEL ROBERT SLAYMAKER, A.B., M.D., Clinical Professor of Medicine.
KELLOGG SPEED, M.D., Clinical Professor of Surgery.
FREDERICK TICE, M.D., Clinical Professor of Medicine.
GEORGE HOWITT WEAVER, M.D., Professor of Pathology.
JOHN CLARENCE WEBSTER, M.D., F.R.C.P., Sc.D., LL.D., Professor Emeritus of Obstetrics and Gynecology.
WILLIAM HAMLIN WILDER, A.M., M.D., Professor Emeritus of Ophthalmology.
ROLLIN TURNER WOODYATT, S.B., M.D., Clinical Professor of Medicine.

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- DONALD PUTNAM ABBOTT, M.D., Associate Clinical Professor of Medicine.
THOMAS DYER ALLEN, M.D., Associate Clinical Professor of Ophthalmology.
JOSEPH LOUIS BAER, S.M., M.D., Associate Clinical Professor of Obstetrics and Gynecology.
ELVEN JAMES BERKHEISER, M.D., Associate Clinical Professor of Surgery (Orthopedic).

‡ Deceased.

RALPH B. BETTMAN, M.D., Associate Clinical Professor of Surgery.

CAREY CULBERTSON, A.B., M.D., Associate Clinical Professor of Obstetrics and Gynecology.

CHARLES GILCHRIST DARLING, M.D., Associate Clinical Professor of Ophthalmology.

CARL BRADEN DAVIS, S.B., M.D., Associate Clinical Professor of Surgery.

GEORGE GILBERT DAVIS, M.D., Associate Clinical Professor of Surgery.

JOHN FAVILL, M.D., Associate Clinical Professor of Neurology.

EARLE B. FOWLER, M.D., Associate Clinical Professor of Ophthalmology.

GATEWOOD GATEWOOD, A.M., M.D., Associate Clinical Professor of Surgery.

LEE CONNEL GATEWOOD, A.M., M.D., Associate Clinical Professor of Medicine.

ISABELLA COLER HERB, M.D., Associate Clinical Professor of Surgery (Anaesthetics).

ARCHIBALD HOYNE, M.D., Associate Clinical Professor of Pediatrics.

AARON ELIAS KANTER, S.M., M.D., Associate Clinical Professor of Obstetrics and Gynecology.

WILLIAM DUNCAN McMALLY, A.B., M.D., Associate Clinical Professor of Medicine (Materia Medica).

EDWIN MORTON MILLER, M.D., Associate Clinical Professor of Surgery.

GEORGE E. MILLER, Ph.D., M.D., Associate Clinical Professor of Medicine (Materia Medica and Toxicology).

JAMES HERBERT MITCHELL, M.D., Associate Clinical Professor of Dermatology.

WILLIAM FRANKLIN MONCREIFF, S.M., M.D., Associate Clinical Professor and Chairman of the Department of Ophthalmology.

ALBERT HERR MONTGOMERY, M.D., Associate Clinical Professor of Surgery.

FREDERICK BROWN MOOREHEAD, S.M., D.D.S., M.D., Associate Clinical Professor of Surgery (Oral and Dental).

EDWARD ALLEN OLIVER, M.D., Associate Clinical Professor of Dermatology.

CHARLES AUBREY PARKER, M.D., Associate Clinical Professor of Surgery (Orthopedic).

ARTHUR HAWLEY PARMELEE, M.D., Associate Clinical Professor of Pediatrics.

CASSIE BELLE ROSE, M.D., Associate Clinical Professor of Surgery (Radiology).

SOLOMON STROUSE, M.D., Associate Clinical Professor of Medicine.

ROGER THROOP VAUGHAN, M.D., Associate Clinical Professor of Surgery.

ROBERT VON DER HEYDT, M.D., Associate Clinical Professor of Ophthalmology.

EDWARD DUDLEY ALLEN, S.B., M.D., Assistant Clinical Professor of Obstetrics and Gynecology.

FRANK WESLEY ALLIN, A.M., M.D., Assistant Clinical Professor of Pediatrics.

CARL WESLEY APFELBACH, M.D., Assistant Professor of Pathology.

AARON ARKIN, A.M., Ph.D., M.D., Assistant Clinical Professor of Medicine.

LOREN WILLIAM AVERY, M.D., Assistant Clinical Professor of Neurology.

CARL PHILIP BAUER, S.B., M.D., Assistant Clinical Professor of Obstetrics and Gynecology.

LEON BLOCH, M.D., Assistant Clinical Professor of Medicine.

MORRIS BRAUDE, M.D., Assistant Clinical Professor of Psychiatry.

EDWARD BUCKMAN, M.D., Assistant Clinical Professor of Surgery (Genito-urinary).

GEORGE HOWELL COLEMAN, M.D., Assistant Clinical Professor of Medicine.

ARTHUR RALPH COLWELL, M.D., Assistant Clinical Professor of Medicine.

MICHAEL HIGGINS EBERT, M.D., Assistant Clinical Professor of Dermatology.

CLARK WYLIE FINNERUD, M.D., Assistant Clinical Professor of Dermatology.

- MORRIS FISHBEIN, M.D., Assistant Clinical Professor of Medicine.
FRANCIS LEO FORAN, S.M., M.D., Assistant Clinical Professor of Medicine.
PAUL CHRISTOPHER FOX, S.B., M.D., Assistant Clinical Professor of Obstetrics and Gynecology.
FREDERICK OLAF FREDRICKSON, M.D., Assistant Clinical Professor of Medicine.
HARRY H. FREILICH, M.D., Assistant Clinical Professor of Medicine.
WALTER WILE HAMBURGER, S.M., M.D., Assistant Clinical Professor of Medicine.
DANIEL BERNARD HAYDEN, A.M., M.D., Assistant Clinical Professor of Laryngology and Otology.
WILLIAM GEORGE HIBBS, M.D., Assistant Clinical Professor of Medicine.
EDWIN FREDERICK HIRSCH, Ph.D., M.D., Assistant Professor of Pathology.
HARRY RICHARD HOFFMAN, M.D., Assistant Clinical Professor of Neurology.
GEORGE HENRY JACKSON, M.D., Assistant Clinical Professor of Surgery.
FRANK BRAZZIL KELLY, M.D., Assistant Clinical Professor of Medicine.
ELMER LAWTON KENYON, A.B., M.D., Assistant Clinical Professor of Laryngology and Otology.
BERTHA KLIEN, M.D., Assistant Professor of Ophthalmology.
DISRAELI WILLIAM KOBAK, M.D., F.R.C.R. (London), Assistant Clinical Professor of Medicine (Physiotherapy).
JOHN A. LARSON, M.D., Assistant Clinical Professor of Medicine (Psychiatry).
ELEANOR I. LESLIE, M.D., Assistant Clinical Professor of Pediatrics.
YALE NORMAN LEVINSON, M.D., Assistant Clinical Professor of Medicine.
THOMAS WILLIAMS LEWIS, S.B., M.D., Assistant Clinical Professor of Laryngology and Otology.
LUDWIG MANNHEIMER LOEB, M.D., Assistant Clinical Professor of Medicine.
MARY M. LYONS, M.D., Assistant Clinical Professor of Surgery (Anaesthetics).
†EDWIN MCGINNIS, A.B., M.D., Assistant Clinical Professor of Laryngology and Otology.
ALICE MCNEAL, S.B., M.D., Assistant Clinical Professor of Obstetrics and Gynecology (Anaesthetics).
GOLDER LEWIS MCWHORTER, M.D., Ph.D., Assistant Clinical Professor of Surgery.
HOMER KING NICOLL, M.D., Assistant Clinical Professor of Medicine.
HARRY ALVIN OBERHELMAN, M.D., Assistant Clinical Professor of Surgery.
HUGH JAMES POLKEY, M.D., Assistant Clinical Professor of Surgery (Genito-urinary).
RICHARD B. RICHTER, M.D., Assistant Clinical Professor of Medicine (Psychiatry).
CARL O. RINDER, M.D., Assistant Clinical Professor of Medicine.
JOHN RITTER, M.D., Assistant Professor Emeritus of Medicine.
DAVID B. ROTMAN, M.D., Assistant Clinical Professor of Medicine (Psychiatry).
GEORGE J. RUKSTINAT, S.B., M.D., Assistant Professor of Pathology.
HEYWORTH N. SANFORD, M.D., Assistant Clinical Professor of Pediatrics.
ELIAS SELINGER, M.D., Assistant Clinical Professor of Ophthalmology.
HOWARD MARTIN SHEAFF, M.D., Assistant Clinical Professor of Medicine.
LEROY HENDRICK SLOAN, M.D., Assistant Clinical Professor of Medicine.
GEORGE OLIVER SOLEM, M.D., Assistant Clinical Professor of Medicine.
ROBERT SONNENSCHN, M.D., Assistant Clinical Professor of Laryngology and Otology.
EDWARD JULIUS STIEGLITZ, M.D., Assistant Clinical Professor of Medicine.

† Deceased.

DAVID C. STRAUS, M.D., Assistant Clinical Professor of Surgery.
FRANCIS HOWE STRAUS, M.D., Assistant Clinical Professor of Surgery.
CHARLES KLAUS STULIK, M.D., Assistant Clinical Professor of Pediatrics.
SAMUEL JAMES TAUB, M.D., Assistant Clinical Professor of Medicine.
WILLIAM ALEXANDER THOMAS, M.D., Assistant Clinical Professor of Medicine.
WILLARD OWEN THOMPSON, M.D., Assistant Clinical Professor of Medicine.
GEORGE ABRAHAM TORRISON, A.B., M.D., Assistant Clinical Professor of Laryngology and Otology.
RALPH W. TRIMMER, M.D., Assistant Clinical Professor of Medicine.
ADRIAN VERBRUGGHEN, M.D., Assistant Clinical Professor of Surgery (Neuro-Surgery)
EMIL GEORGE VRTIAK, M.D., Assistant Clinical Professor of Medicine.
JOHN M. WELSH, M.D., Major U.S.A., Assistant Clinical Professor of Military Medicine.

RICHARD H. JAFFÉ, M.D., Professorial Lecturer in Pathology.
WILLIAM C. WOODWARD, LL.M., LL.D., Professorial Lecturer in Medicine (Medical Jurisprudence).

JOSEPH E. ALLEGRETTI, S.B., R.PH., M.D., Clinical Instructor in Medicine.
STEPHEN PANTELIS ANTHONY, M.D., Clinical Instructor in Medicine.
MARGARET HOWARD AUSTIN, M.D., Clinical Instructor in Medicine.
HILLIER L. BAKER, M.D., Clinical Instructor in Surgery.
KNOWLTON E. BARBER, M.D., Clinical Instructor in Surgery (Genito-urinary).
BERT I. BEVERLY, M.D., Clinical Instructor in Pediatrics.
NORA B. BRANDENBURG, M.D., Clinical Instructor in Surgery (Anaesthetics).
WILLIAM L. BUHRMAN, M.D., Clinical Instructor in Pediatrics.
CRAIG D. BUTLER, M.D., Clinical Instructor in Pediatrics.
LEO K. CAMPBELL, M.D., Clinical Instructor in Medicine.
THOMAS COTTRELL, M.D., Clinical Instructor in Surgery (Genito-urinary).
GERRITT COTTS, S.B., M.D., Clinical Instructor in Obstetrics and Gynecology.
LOUIS T. CURRY, M.D., Clinical Instructor in Laryngology and Otology.
BEULAH CUSHMAN, M.D., Clinical Instructor in Ophthalmology.
CLIFFORD L. DOUGHERTY, M.D., Clinical Instructor in Laryngology and Otology.
JAMES BRYAN EYERLY, M.D., Clinical Instructor in Medicine.
MARION S. FINK, M.D., Clinical Instructor in Dermatology.
ALEXANDER GAREGIN GABRIELIANZ, M.D., Clinical Instructor in Obstetrics and Gynecology.
MAX PETER GETHNER, M.D., Clinical Instructor in Medicine.
PALMER GOOD, M.D., Clinical Instructor in Laryngology and Otology.
ELMER WILLIAM HAGENS, M.D., Clinical Instructor in Laryngology and Otology.
HARRY G. HARDT, M.D., Clinical Instructor in Neurology.
RALPH LEE HARRIS, M.D., Clinical Instructor in Medicine.
GEORGE FIELDING HIBBERT, S.B., M.D., Clinical Instructor in Obstetrics and Gynecology.
HOWARD JEAN HOLLOWAY, S.B., M.D., Clinical Instructor in Obstetrics and Gynecology.
MAX M. JACOBSON, M.D., Clinical Instructor in Ophthalmology.
ROBERT EASTNOR JOHANNESSEN, M.D., Clinical Instructor in Medicine.

MERRILL H. KILLIP, D.D.S., Clinical Instructor in Surgery (Oral).
ALVA A. KNIGHT, M.D., Clinical Instructor in Medicine.
ROSS STANLEY LANG, M.D., Clinical Instructor in Medicine.
VERNON MAYNE LEECH, M.D., Clinical Instructor in Ophthalmology.
MEYER R. LICHTENSTEIN, M.D., Clinical Instructor in Medicine.
CLAYTON J. LUNDY, M.D., Clinical Instructor in Medicine.
EARL ROACH MCCARTHY, M.D., Clinical Instructor in Surgery.
ROLAND PARKS MACKAY, M.D., Clinical Instructor in Medicine (Neurology).
RUBEN NOMLAND, M.D., Clinical Instructor in Dermatology.
EVANS W. PERNOKIS, M.D., Clinical Instructor in Medicine.
WILLIS J. POTTS, M.D., Clinical Instructor in Surgery.
PAUL S. RHOADS, M.D., Clinical Instructor in Medicine.
ABRAHAM M. SERBY, M.D., Clinical Instructor in Medicine.
CHARLES ARTHUR SIMA, M.D., Clinical Instructor in Medicine.
FAY HUFFMAN SQUIRE, M.D., Clinical Instructor in Surgery (Radiology).
ANDREW J. SULLIVAN, S.B., M.D., Clinical Instructor in Surgery (Genito-urinary).
GEORGIANNA DVORAK THEOBALD, M.D., Clinical Instructor in Ophthalmology.
KAY L. THOMPSON, D.D.S., Clinical Instructor in Surgery (Oral).
EUGENE FAGAN TRAUT, M.D., Clinical Instructor in Medicine.
IRVING TREIGER, M.D., Clinical Instructor in Medicine.
THOMAS GERVASE WALSH, M.D., Clinical Instructor in Medicine.
RICHARD W. WATKINS, M.D., Clinical Instructor in Laryngology and Otology.
JOHN FRANK WAUGH, M.D., Clinical Instructor in Dermatology.
CHARLES GRAFTON WELLER, M.D., Clinical Instructor in Surgery (Genito-urinary).
WILLIAM J. YONKER, M.D., Clinical Instructor in Laryngology and Otology.
EARL ALFRED ZAUS, M.D., Clinical Instructor in Medicine.
JOHN JOSEPH ZAVERTNIK, M.D., Clinical Instructor in Pediatrics.

JENNIE KANTOR-AMTMAN, M.D., Clinical Associate in Pediatrics.
JOHN SHERMAN ASHBY, S.M., M.D., Clinical Associate in Medicine.
CHARLES MELVILLE BACON, M.D., Clinical Associate in Medicine.
FRED BALL, M.D., Clinical Associate in Medicine.
STUYVESANT BUTLER, M.D., Clinical Associate in Medicine.
JAY BAILEY CARTER, M.D., Clinical Associate in Medicine.
CYRIL V. CRANE, M.D., Clinical Associate in Ophthalmology.
MARION M. CRANE, M.D., Clinical Associate in Pediatrics.
NATHAN N. CROHN, M.D., Clinical Associate in Surgery.
ARTHUR E. DIGGS, M.D., Clinical Associate in Surgery.
DOROTHY EDWARDS, S.B., M.D., Clinical Associate in Obstetrics and Gynecology.
ESTHER FRANKEL, M.D., Clinical Associate in Medicine (Physiotherapy).
WILLIS E. GOUWENS, M.D., Clinical Associate in Medicine.
O. EARL GRAY, M.D., Clinical Associate in Medicine.
JOHN JACOB HESSER, M.D., Clinical Associate in Medicine.
BENJAMIN H. HILKEVITCH, M.D., Clinical Associate in Medicine.
JAY IRELAND, M.D., Clinical Associate in Surgery.
WILLIAM JAMES KIRBY, M.D., Clinical Associate in Medicine.
ARTHUR HERMAN KLAUWANS, S.B., M.D., Clinical Associate in Obstetrics and Gynecology.

STANLEY E. LAWTON, M.D., Clinical Associate in Surgery.
MARK LORING, M.D., Clinical Associate in Surgery.
LAWRENCE L. McLELLAN, M.D., Clinical Associate in Medicine.
EARL EMANUEL MADDEN, S.B., M.D., Clinical Associate in Obstetrics and Gynecology.
FLORENCE M. MEADER-REES, M.D., Clinical Associate in Pediatrics.
RANDOLPH OLMSTED, M.D., Clinical Associate in Surgery.
CHARLES DUSTIN PARKER, M.D., Clinical Associate in Surgery (Genito-urinary).
CHESTER A. PERRODIN, M.D., Clinical Associate in Surgery (Genito-urinary).
WILMOT F. PIERCE, M.D., Clinical Associate in Surgery.
DEAN L. RIDER, M.D., Clinical Associate in Surgery.
JAMES M. ROBBINS, M.D., Clinical Associate in Medicine (Psychiatry).
MARY GRITZNER SCHROEDER, M.D., Clinical Associate in Medicine (Psychiatry).
YETTA SCHEFTEL, M.D., Clinical Associate in Medicine (Neurology).
ELLIS SCHWEID, M.D., Clinical Associate in Obstetrics and Gynecology.
GEORGE E. SHAMBAUGH, JR., M.D., Clinical Associate in Laryngology and Otology.
AGNES SHARP, A.B., A.M., Clinical Associate in Medicine (Abnormal Psychology).
NOEL GARNET SHAW, M.D., Clinical Associate in Pediatrics.
MAURICE SIMKIN, M.D., Clinical Associate in Medicine.
WILLIAM SIMKIN, M.D., Clinical Associate in Medicine.
CARL THOMPSON STEPHAN, S.B., M.D., Clinical Associate in Obstetrics and Gynecology.
ELIZABETH KALES STRAUS, A.B., M.D., Clinical Associate in Medicine.
FRANK V. THEIS, M.D., Clinical Associate in Surgery.
RICHARD I. TORPIN, A.B., M.D., Clinical Associate in Obstetrics and Gynecology.
EDGAR C. TURNER, M.D., Clinical Associate in Surgery (Orthopedic).
GEORGE C. TURNER, M.D., Clinical Associate in Medicine.
LINDEN J. WALLNER, M.D., Clinical Associate in Laryngology and Otology.
JAMES LISLE WILLIAMS, A.M., M.D., Clinical Associate in Medicine.
FRANK WOJNIAK, M.D., Clinical Associate in Laryngology and Otology.
LEWIS W. WOODRUFF, M.D., Clinical Associate in Medicine.

KENNING MEREDITH ANDERSON, M.D., Clinical Assistant in Pediatrics.
THOMAS ADDISON BAIRD, M.D., Clinical Assistant in Medicine.
EVAN M. BARTON, A.B., M.D., Assistant in Pathology.
GEORGE OTTO BAUMRUCKER, M.D., Clinical Assistant in Surgery (Genito-urinary).
ANNA E. BOLLER, Ph.B., Clinical Assistant in Pediatrics (Dietetics).
IAN HUBERT BOND, A.B., M.D., Clinical Assistant in Pediatrics.
BENJAMIN W. BREISTER, M.D., Clinical Assistant in Obstetrics and Gynecology.
JOSEPH H. CHIVERS, M.D., Clinical Assistant in Surgery.
GORDON W. ELRICK, M.D., Clinical Assistant in Pediatrics.
ANTON FEHER, M.D., Clinical Assistant in Surgery.
MARION J. FILIPIAK, M.D., Clinical Assistant in Pediatrics.
MILNOR R. FREELAND, S.B., Assistant in Pathology.
HARRY W. FINK, M.D., Clinical Assistant in Obstetrics and Gynecology.
THEODORE H. GASTEYER, M.D., Clinical Assistant in Pediatrics.
RICHARD K. GILCHRIST, M.D., Francis A. Hardy Fellow in Surgery; House Surgeon,
Presbyterian Hospital.
J. MAJOR GREEN, M.D., Clinical Assistant in Medicine.
NORRIS HECKEL, M.D., Clinical Assistant in Surgery (Genito-urinary).

- ROBERT B. HEMPHILL, M.D., Clinical Assistant in Medicine.
RUDOLPH HENNEMEYER, M.D., Clinical Assistant in Medicine.
JERRY KEARNS, M.D., Assistant in Pathology.
MITCHELL L. KRUPINSKI, M.D., Clinical Assistant in Pediatrics.
RALPH LEMASTER, M.D., Clinical Assistant in Pediatrics.
EURIPIDES NITTIS, M.D., Clinical Assistant in Surgery.
SAVAS NITTIS, M.D., Clinical Assistant in Medicine.
RICHARD A. PERRITT, M.D., Clinical Assistant in Ophthalmology.
LOUIS F. PLZAK, M.D., Clinical Assistant in Surgery.
GEORGE L. PERUSSE, M.D., Clinical Assistant in Surgery.
G. BERNICE RHODES, A.M., Assistant in Pathology.
A. LOUIS ROSI, M.D., Thomson-Bevan Fellow in Surgery; House Surgeon, Presbyterian Hospital.
WILLIAM GEORGE RURIK, M.D., Clinical Assistant in Medicine.
ARTHUR SCHWARCZ, M.D., Clinical Assistant in Surgery (Genito-urinary).
FRED SHAPIRO, M.D., Clinical Assistant in Surgery (Orthopedic).
LEONARD J. SHERWIN, D.D.S., Clinical Assistant in Surgery (Oral).
ALLAN S. SHOHEIT, M.D., Clinical Assistant in Medicine.
CHARLES ARTHUR SILER, M.D., Clinical Assistant in Medicine.
HALL IVAN SIPPY, S.M., M.D., Clinical Assistant in Medicine.
EDWARD A. SKOLNIK, M.D., Clinical Assistant in Dermatology.
ARTHUR STENN, M.D., Clinical Assistant in Medicine.
†EDWARD J. STONE, M.D., Clinical Assistant in Obstetrics and Gynecology.
RICHARD B. STOOPS, M.D., Clinical Assistant in Medicine.
JAROSLAV TETREV, M.D., Clinical Assistant in Medicine.
JAY EUGENE TREMAINE, S.B., M.D., Clinical Assistant in Surgery.
LOUIS STEPHEN FARZINO, M.D., Clinical Assistant in Surgery (Orthopedic).
ERNEST S. WATSON, M.D., Clinical Assistant in Pediatrics.
THEODORA WHEELER, M.D., Clinical Assistant in Medicine (Neurology).
NORMAN T. WELFORD, M.D., Clinical Assistant in Pediatrics.
BENJAMIN I. WEININGER, M.D., Clinical Assistant in Medicine (Neurology).

† Deceased.

THE DEPARTMENTS

THE DEPARTMENT OF PATHOLOGY

RUSH MEDICAL COLLEGE

OFFICERS OF INSTRUCTION

LUDVIG HEKTOEN, M.D., Sc.D., LL.D., Professor of Pathology.

EDWIN RAYMOND LECOUNT, M.D., Professor and Chairman of the Department of Pathology.

GEORGE HOWITT WEAVER, M.D., Professor of Pathology.

EDWIN FREDERICK HIRSCH, Ph.D., M.D., Assistant Professor of Pathology.

CARL WESLEY APFELBACH, M.D., Assistant Professor of Pathology; Resident Pathologist, Presbyterian Hospital.

GEORGE J. RUKSTINAT, S.B., M.D., Assistant Professor of Pathology.

MILNOR R. FREELAND, S.B., Assistant in Pathology.

G. BERNICE RHODES, A.M., Assistant in Pathology.

EVAN M. BARTON, A.B., M.D., Assistant in Pathology.

JERRY KEARNS, M.D., Assistant in Pathology.

———, E. R. LeCount Fellowship in Pathology, established by Dr. Frank Billings.

RICHARD H. JAFFÉ, M.D., Professorial Lecturer in Pathology.

COURSES OF INSTRUCTION

12. Special Pathologic Anatomy and Histology.—Limited to twenty-five students. Practical instruction is given in the methods of making post-mortem examinations and of recording the results. The student studies and describes the gross and microscopic appearance of diseased organs and tissue. Bacteriologic and chemical methods and experiments are employed whenever indicated and the clinical relations (pathologic physiology) of the morbid conditions are emphasized. *Prerequisite:* courses *Pathology 1 and 2* and at least one quarter of clinical work. Daily, 2:00–4:00, and autopsies. 144 hours. 1.2Mjs. each quarter; also daily, 9:00–11:00, Autumn and Winter, LECOUNT AND ASSISTANTS.

12A. A Continuation of Course 12 for Students Taking Additional Work Along the Same Lines.—Hours to be arranged; two hours daily. 144 hours. 1.2Mj. Autumn, Winter, and Spring, LECOUNT AND ASSISTANTS.

13. The Histology and Diagnosis of Tumors.—*Prerequisite:* Pathology 201 and 202. 8:00–10:00. 72 hours. Mj. Autumn, LECOUNT.

14. Infection and Immunity.—A lecture course. Autumn, Second Term; W., Sat. 8:00. 12 hours. 2Mj. HEKTOEN AND ASSISTANTS.

17. Advanced Laboratory Work and Research in Pathology.—Open to a limited number of specially qualified students and graduates in medicine. Hours arranged for each student. Credit given based on time and quality of work. Throughout the year. HEKTOEN AND LECOUNT.

18. Pathology Conferences at Rush Medical College or Presbyterian Hospital.—S. 11:00–1:00; at Cook County Hospital, Th., 11:00–1:00. Throughout the year. Open to all students. No credit.

19. Morbid Anatomy.—Museum attendance. Required for all students throughout the year. Limited to groups of 25. $\frac{1}{2}$ hour, one day a week. 6 hours.

THE DEPARTMENT OF MEDICINE

RUSH MEDICAL COLLEGE

OFFICERS OF INSTRUCTION

ERNEST EDWARD IRONS, Chairman of the Department of Medicine.

JAMES BRYAN HERRICK, A.M., M.D., Professor Emeritus of Medicine.

‡JOHN MILTON DODSON, A.M., M.D., Professor Emeritus of Medicine.

SAMUEL ROBERT SLAYMAKER, A.B., M.D., Clinical Professor of Medicine.

ROLLIN TURNER WOODYATT, S.B., M.D., Clinical Professor of Medicine.

WILBER E. POST, M.D., Clinical Professor of Medicine.

ERNEST EDWARD IRONS, M.D., PH.D., Clinical Professor of Medicine.

RALPH CRISSMAN BROWN, M.D., Clinical Professor of Medicine.

FREDERICK TICE, M.D., Clinical Professor of Medicine.

ARTHUR R. ELLIOTT, M.D., Clinical Professor of Medicine.

DONALD PUTNAM ABBOTT, M.D., Associate Clinical Professor of Medicine.

SOLOMON STROUSE, M.D., Associate Clinical Professor of Medicine.

LEE CONNEL GATEWOOD, A.M., M.D., Associate Clinical Professor of Medicine.

GEORGE E. MILLER, PH.D., M.D., Associate Clinical Professor of Medicine (Materia Medica and Toxicology).

WILLIAM DUNCAN McNALLY, A.B., M.D., Associate Clinical Professor of Medicine (Materia Medica).

JOHN RITTER, M.D., Assistant Professor Emeritus of Medicine.

LUDWIG MANNHEIMER LOEB, M.D., Assistant Clinical Professor of Medicine.

LEON BLOCH, M.D., Assistant Clinical Professor of Medicine.

HOMER KING NICOLL, M.D., Assistant Clinical Professor of Medicine.

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MORRIS FISHBEIN, M.D., Assistant Clinical Professor of Medicine.

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FREDERICK OLAF FREDRICKSON, M.D., Assistant Clinical Professor of Medicine.

AARON ARKIN, A.M., PH.D., M.D., Assistant Clinical Professor of Medicine.

JOHN M. WELSH, M.D., Major U.S.A., Assistant Clinical Professor of Military Medicine.

‡ Deceased.

WILLARD O. THOMPSON, M.D., Assistant Clinical Professor of Medicine.
WILLIAM GEORGE HIBBS, M.D., Assistant Clinical Professor of Medicine.
ARTHUR RALPH COLWELL, M.D., Assistant Clinical Professor of Medicine.
HARRY H. FREILICH, M.D., Assistant Clinical Professor of Medicine.
SAMUEL JAMES TAUB, M.D., Assistant Clinical Professor of Medicine.
WILLIAM C. WOODWARD, M.D., LL.D., Lecturer in Medicine (Medical Jurisprudence).
STEPHEN PANTELIS ANTHONY, M.D., Clinical Instructor in Medicine.
JAMES BRYAN EYERLY, M.D., Clinical Instructor in Medicine.
THOMAS GERVASE WALSH, M.D., Clinical Instructor in Medicine.
MARGARET HOWARD AUSTIN, M.D., Clinical Instructor in Medicine.
JOSEPH E. ALLEGRETTI, S.B., R.Ph., M.D., Clinical Instructor in Medicine.
ROSS STANLEY LANG, M.D., Clinical Instructor in Medicine.
MEYER R. LICHTENSTEIN, M.D., Clinical Instructor in Medicine.
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CHARLES ARTHUR SIMA, M.D., Clinical Instructor in Medicine.
EUGENE FAGAN TRAUT, M.D., Clinical Instructor in Medicine.
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JAMES LISLE WILLIAMS, A.M., Clinical Associate in Medicine.
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FRED A. BALL, M.D., Clinical Associate in Medicine.
MAURICE SIMKIN, M.D., Clinical Associate in Medicine.
WILLIAM SIMKIN, M.D., Clinical Associate in Medicine.
JOHN SHERMAN ASHBY, M.S., M.D., Clinical Associate in Medicine.
ESTHER FRANKEL, M.D., Clinical Associate in Medicine (Physiotherapy).
WILLIAM JAMES KIRBY, M.D., Clinical Associate in Medicine.
GEORGE C. TURNER, M.D., Clinical Associate in Medicine.
BENJAMIN H. HILKEVITCH, M.D., Clinical Associate in Medicine.
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SAVAS NITTIS, M.D., Clinical Assistant in Medicine.
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 RUDOLPH HENNEMEYER, M.D., Clinical Assistant in Medicine.
 RICHARD B. STOOPS, M.D., Clinical Assistant in Medicine.
 THOMAS ADDISON BAIRD, M.D., Clinical Assistant in Medicine.

FELLOWS

_____, Wilber E. Post Fellowship (established by Dr. Frank Billings).
 _____, James B. Herrick Fellowship (established by Dr. Frank Billings).
 _____, Ernest E. Irons Fellowship (established by Dr. Frank Billings).

INTRODUCTORY

In this department instruction is given in the topics usually comprised under the terms Internal Medicine, Neurology, Materia Medica, Therapeutics, Toxicology, and Medical Jurisprudence. Each student is required to complete 6 majors in the Department of Medicine of which at least .6 major must be in Neurology, .4 major in Psychiatry, and 2 majors in Materia Medica, Therapeutics, and Toxicology. The courses specifically required are, in Medicine proper, 0, 0A, 2, 5, 6, 50, 61, and 64. .3Mj. of course 6 is credited to Neurology.

In addition to courses in Therapeutics dealing with the use of drugs in the treatment of disease, the student is given practical instruction in Therapeutics during his clinical clerkship in the Presbyterian and other hospitals where he follows the course of the patient and observes the results of treatment.

Courses in clinical medicine dealing specifically with Therapeutics (for example, 23) or in part with Therapeutics (course 50, .6Mj. credit) may be applied on the required credit in Materia Medica and Therapeutics.

COURSES OF INSTRUCTION

INTERNAL MEDICINE

JUNIOR YEAR

0. Practice of Medicine.—A conference and recitation course on the essentials of the practice of medicine designed to afford a general survey of the more important diseases and conditions in preparation for the clinical courses. Limited to 30 in each section. 36 hours. M., W., F., 8:00. .6Mj. Autumn and Spring, KELLY, LEVINSON, STIEGLITZ, PERNOKIS, SHEAFF, WALSH.

0A. Practice of Medicine.—A continuation of course 0. M., W., F., 8:00, Winter and Summer.

2. Physical Examination.—A conference and practical course on the methods of physical exploration, chiefly of the normal body. Sections *a, b, c, d, e*, M., Th., 9:00–11:00; Sections *f, g, h, i, j*, W., Sat., 9:00–11:00. All sections will meet on Tuesday, 8:00–9:00. 60 hours. .5Mj. Autumn, Winter, and Spring, GATEWOOD AND OTHERS.

5. Laboratory Diagnosis.—A laboratory course in the chemical, microscopic, and bacteriologic examination of blood, urine, sputum, gastric contents, feces, secretions, exudates, etc., and their pathologic and clinical significance, special attention being given to the acquisition of an accurate technique. Sec. *a*, M., Th., 9:00–11:00; sec. *c*, W., Sat., 9:00–11:00. 48 hours. .4Mj. Autumn and Spring, PERNOKIS, GRAY AND OTHERS.

6. A Clinical Course.—In the Central Free Dispensary each quarter. In the departments of Internal Medicine, and of Nervous and Mental Diseases, conducted by mem-

bers of the Department. Prerequisite: Physical and Laboratory Diagnosis. In sections, one quarter for each section. Four days a week, 9:00-11:00. 96 hours. .8 Mjs., .3Mj. of which is in Nervous and Mental Diseases.

SENIOR YEAR

3A. Clinic and Conference Course at the Cook County Hospital.—Topics: Summer, General Medicine; Autumn, Heart and Respiratory; Winter, General Medicine; Spring, Infectious Diseases. Limited to 10. Tu., F., 9:00-11:00. 48 hours. .4 Mj. TRAUT.

3B. Clinic and Conference Courses at the Cook County Hospital.—Topics: Autumn: Infectious diseases; Spring: Diseases of blood and ductless glands. Limited to 10. Tu., F., 2:00-4:00. 48 hours. .4Mj. ———.

3C. Clinic and Conference Course at the Cook County Hospital.—Topic: General medicine. Winter and Spring. Limited to 10. W., Sat., 9:00-11:00. 48 hours. .4Mj. TICE.

3E. Clinic and Conference Course at the Cook County Hospital.—Topic: Spring: Heart and respiratory diseases. Limited to 10. M., Th., 9:00-11:00. 48 hours. .4Mj. L. C. GATEWOOD.

3F. Clinic and Conference Course at the Cook County Hospital.—Topic: Respiratory diseases with special reference to tuberculosis. Each quarter. Limited to 10. W., S., 2:00-4:00. 48 hours. .4Mj. FREILICH.

3H. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn, Cardio-vascular and renal diseases; Winter, Respiratory diseases. Limited to 10. M., Th., 9:00-11:00. 48 hours. .4Mj. ARKIN.

3J. Clinic and Conference Course at the Cook County Hospital.—Topics: Summer, Heart diseases; Winter, Respiratory diseases. Limited to 10. W., S., 9:00-11:00. 48 hours. .4Mj. SLOAN.

3R. Clinic and Conference Course at the Cook County Hospital.—Topic: General medicine with special reference to diseases of the heart and lungs. Autumn and Spring. W., S., 9:00-11:00. Limited to 10. 48 hours. .4Mj. ———.

Additional clinics will be scheduled for the Summer Quarter, if required, to meet the needs of the number of students in residence.

3W. Clinic and Conference Course at the Michael Reese Dispensary.—Topic: Diseases of the gastro-intestinal tract. Limited to 6. Tu., F., 11:00-1:00. 48 hours. .4Mj. Each quarter. BLOCH.

6B. Clinical Courses at the Central Free Dispensary.—Topic: Diabetes. Limited to 2. Prerequisite: Course 6. Each quarter, Th., 9:00-11:00. .2Mj. WOODYATT, CAMPBELL.

6C. Clinical Course at the Central Free Dispensary.—Topic: Diseases of the heart and blood vessels. Limited to 6. Prerequisite: same as for 6B. Each quarter. .4Mj. M., Th., 9:00-11:00. SLAYMAKER, ANTHONY, GETHNER. Tu., F., LUNDY, WOODRUFF; W. and S., AUSTIN, ZAUS, GRAY.

6D. Clinical Course at the Central Free Dispensary.—Topic: Diseases of the alimentary tract. Limited to 4 in each section. Prerequisite: same as for 6B. Each quarter, sec. *a*, M., Th., 9:00-11:00. .4Mj. ABBOTT, FREDRICKSON; sec. *b*, Tu., F., 9:00-11:00. L. C. GATEWOOD, TRIMMER, ASHBY; sec. *c*, W., S., 9:00-11:00, EYERLY, HARRIS.

6E. Clinical Course at the Central Free Dispensary.—Topic: Diseases of the kidney. Limited to 4. Prerequisite: same as for 6B. Each quarter, W., S., 9:00-11:00. .4Mj. LUNDY, HILKEVITCH.

6F. Clinical Course at the Central Free Dispensary.—Topic: Allergy. Limited to 2. Prerequisite same as for course 6B. Each quarter, M., Th., 9:00-11:00. .4Mj. FORAN, LICHTENSTEIN.

6H. Clinical Course at Central Free Dispensary.—Arthritis. Limited to 2. Each quarter, Tu., F., 9:00-11:00 .4Mj. VRTIAK.

8. Clinical and Conference Course.—Topic: Diseases of chest with special reference to the technique of physical diagnosis. Limited to 15. Autumn, Tu., F., 9:00-11:00 (Winter and Spring days to be announced.) 48 hours. .4Mj. ABBOTT.

ARENA CLINICS—RUSH MEDICAL COLLEGE

Days	Summer Quarter	Autumn Quarter	Winter Quarter	Spring Quarter
M., Th., 9:00-10:00	Metabolism V11-9	Metabolism V11-9	Metabolism V11-9	Metabolism V11-9
M., Th., 10:00-11:00		Cardio-vascular and Renal V11-10	Cardio-vascular and Renal V11-10	Cardio-vascular and Renal V11-10
Tu., F., 9:00-10:00	General Medicine V11-15	Therapeutics V11-53	Infectious Diseases V11-12	Therapeutics V11-53
Tu., F., 10:00-11:00		Heart V11-11	Heart V11-11	Heart V11-11
W., S., 9:00-10:00	Gastro-Intestinal V11-13	Gastro-Intestinal V11-13	Gastro-Intestinal V11-13	Gastro-Intestinal V11-13
W., S., 10:00-11:00		Diseases of Blood V11-14		Allergy and T.B. V11-16

JUNIOR AND SENIOR YEAR

9. Clinical Medicine.—General Medicine with special reference to metabolic aspects of disease. Each quarter, M., Th., 9:00–11:00. 24 hours. .2Mj. WOODYATT, COLWELL, THOMPSON, CAMPBELL.

10. Clinical Medicine.—General Medicine with special reference to cardio-vascular and renal diseases. Autumn, Winter and Spring, M., Th., 10:00–11:00. 24 hours. 2Mj. POST AND ASSOCIATES.

11. Clinical Medicine.—General Medicine with special reference to diseases of the heart and blood vessels. Autumn, Winter and Spring, Tu., F., 10:00–11:00. 24 hours. .2Mj. HERRICK, SLAYMAKER, KELLY, WOODRUFF.

12. Clinical Medicine.—General Medicine with special reference to Infectious Diseases, Diseases of the Respiratory Tract and Therapeutics. Winter, Tu., F., 9:00–10:00. 24 hours. .2Mj. IRONS, KELLY.

13. Clinical Medicine.—General Medicine with special reference to diseases of the Alimentary Tract. Each quarter, W., S., 9:00–10:00. 24 hours. .2Mj. BROWN, ABOTT, EYERLY.

14. Clinical Medicine.—General Medicine with special reference to Blood, Liver and Spleen. Autumn, W. S., 10:00–11:00. 24 hours. .2Mj. PERNOKIS.

15. Clinical Medicine.—General Medicine. Summer, Tu., F., 9:00–10:00. 24 hours. .2Mj. RINDER.

16. Clinical Medicine.—General Medicine with special reference to Allergy and Tuberculosis. Spring, W., S., 10:00–11:00. 24 hours. .2Mj. FORAN, TURNER.

23. Therapeutic Clinic.—A medical clinic at the Cook County Hospital, with special reference to Chest Diagnosis. Autumn and Winter, W., 6:30–8:30 P.M. 24 hours. .2Mj. GATEWOOD.

24. Clinical Medicine.—General Medicine with special reference to Infectious Diseases. M., 7:00–9:00. 12 hours. .2Mj. Autumn. SLOAN. General Medicine with special reference to Blood, Liver and Spleen. Spring, M., 7:00–9:00. .2Mj. 12 hours. ARKIN.

25. A Clinical Course in Electrocardiography at Cook County Hospital.—Limited to 15 students. 24 hours. .2Mj. Summer, W., 11:00–1:00; Winter, W., 11:00–1:00.

26. Vascular and Renal Diseases.—Lecture course. Winter, Spring, W., S., 8:00–9:00. .4Mj. STIEGLITZ.

27. Industrial Medicine.—A clinical and conference course to illustrate the diseases and injuries peculiar to the industries, including preventive medicine. Limited to 12. F., 7:00–9:00 P.M. 24 hours .2Mj. PERNOKIS.

28. Advanced Physical Diagnosis.—A clinical course with special reference to methods and technique of physical diagnosis. 48 hrs. .4Mj. Tu., F., 9:00–11:00, Autumn, Winter, Spring.

33. Variola (extra-mural).—A clinical course in variola, at the Chicago Isolation Hospital, at intervals as material is afforded. Class limited to 10 each. .2Mj. HOYNE.

42. Physiotherapy.—A conference and practice course on the methods of physical therapy including methods of reconstruction. Each quarter, Tu. and F., 9:00–11:00, 48 hours. .4Mj. Limited to 10. KOBAK.

50. Clinical Clerkship in Presbyterian Hospital.—6 weeks. 9:00–4:00 daily. 252 hours. 1.5Mj. Limited to 20. Taken in combination with similar course in the Department of Surgery. The student will work in the wards of the hospital under supervision of the staff of the hospital. His work will include taking of the history and the examination of the patient, the making of routine laboratory examinations, observation of the course of the disease, and study of the therapeutic methods employed.

Municipal Tuberculosis Sanitarium.—Given one morning per week. 9:00–12:00. Days to be announced. Methods of examination of the chest. Given in connection with Clerkship in Medicine.

50A. Clinical Clerkship in Michael Reese Hospital.—(Same as Course 50.) Limited to 12.

50B. Clinical Clerkship in Washington Boulevard Hospital.—(Same as Course 50.) Limited to 4.

50C. Clinical Clerkship in St. Luke's Hospital.—(Same as Course 50.) Limited to 4.

50D. Clinical Clerkship in Cook County Hospital.—(Same as Course 50.) Limited to 14.

53. Materia Medica and Therapeutics.—A lecture and conference course dealing with the physical, chemical, and pharmaceutical properties of medicinal agents, their toxicology, and therapeutic application in the treatment of disease. Lectures and conferences. Autumn and Spring, Tu., F., 9:00–10:00. 24 hours. .4Mj. IRONS, GRAY.

53A. Toxicology and Materia Medica.—A lecture, conference, and laboratory course dealing with the practical work in toxicology and materia medica. Autumn and Spring, Tu., F., 9:00–11:00. 48 hours. .6Mj. McNALLY AND MILLER.

53B. Toxicology.—An advanced conference and laboratory course dealing with the physical and chemical properties of the more important poisons, their effects and treatment, and their detection. Conferences and laboratory. 60 hours. .8Mj. Hours to be arranged. McNALLY.

61. Medical Jurisprudence, Hygiene and Preventive Medicine.—A lecture course supplemented by recitations and conferences. Days to be arranged, 12:00–1:00. .4Mj. Winter, WOODWARD AND OTHERS.

62. Clinical Phenomena.—A lecture course presented by members of the Department of Medicine dealing with the physiology and significance of some major symptoms of disease. Among the subjects to be discussed are Fever, Anemia, Icterus, Menstruation, Dyspnea, Edema and Convulsions, etc. Emphasis is placed upon the effects of these and other disturbances upon the general economy and efficiency of the body. Autumn, Tu., F., 8:00–9:00. 24 hours. .4Mj. MEMBERS OF THE MEDICAL DEPARTMENT.

63. Examinations for Life Insurance.—A lecture and conference course on the nature and purpose of life insurance, the duties and essential qualifications of the examiner for life insurance, etc. 12 hours. W., 5:00–6:00. .2Mj. Winter, ———.

64. Medical Economics and Preventive Medicine.—A lecture course in Medical Economics and Ethics. 12 hours. Hours to be announced. .2Mj. Autumn.

65. General Review of the Clinical Branches.—A conference and recitation course affording Senior students an opportunity to review the clinical branches and to coordinate their knowledge in preparation for examinations for license or for hospital internships and for practice of medicine. In sections limited to 30 each. 6 hours a week for each section. Summer, sec. *a*, M., W., Th., 4:00–6:00; sec. *b*, Tu., W., F., 4:00–6:00. 1Mj.

65A. A continuation of course 65. Autumn. 1Mj.

68. Military Medicine.—A course in medicine, hygiene, sanitation, administration, and surgery as related to the medical departments of the army, navy, and marine corps. Each quarter, F., Seniors, 1:00–2:00; Juniors, 2:00–3:00. .2Mj.

Courses for first, second, third, and fourth years are arranged in accordance with the program authorized by the Surgeon-General, U.S.A.

69. Medical History and Medical Writing.—A lecture course on the evolution of modern medicine and on the art of medical writing. 12 hours. .2Mj. Tu., 5:00–6:00. Autumn Quarter, FISHBEIN.

GRADUATE COURSES IN MEDICINE

A limited number of graduates will be accepted for work in General Medicine. For the present the course may be for either one or two years. Applicants must be approved by a department Committee. For particulars apply to the Dean.

NERVOUS AND MENTAL DISEASES

OFFICERS OF INSTRUCTION

THOR ROTHSTEIN, M.D., Professor Emeritus of Neurology.
 PETER BASSOE, M.D., Clinical Professor of Neurology.
 SYDNEY KUH, M.D., Clinical Professor of Psychiatry.
 JAMES CORNELIUS GILL, M.D., Clinical Professor of Neurology.
 GEORGE WASHINGTON HALL, A.M., M.D., Clinical Professor of Neurology.
 JOHN FAVILL, M.D., Associate Clinical Professor of Neurology.
 HARRY RICHARD HOFFMAN, M.D., Assistant Clinical Professor of Neurology.
 LOREN WILLIAM AVERY, M.D., Assistant Clinical Professor of Neurology.
 MORRIS BRAUDE, M.D., Assistant Clinical Professor of Psychiatry.
 JOHN A. LARSON, M.D., Assistant Clinical Professor of Psychiatry.
 RICHARD BIDDLE RICHTER, M.D., Assistant Clinical Professor of Neurology, and Daniel R. Brower Fellow.
 DAVID B. ROTMAN, M.D., Assistant Clinical Professor of Psychiatry.
 HARRY G. HARDT, M.D., Clinical Instructor in Neurology.
 ROLAND PARKS MACKAY, M.D., Clinical Instructor in Neurology.
 MARY GRITZNER SCHROEDER, M.D., Clinical Associate in Psychiatry.
 YETTA SCHEFTEL, M.D., Clinical Associate in Neurology.
 JAMES M. ROBBINS, M.D., Clinical Associate in Psychiatry.
 AGNES SHARP, A.B., A.M., Clinical Associate in Abnormal Psychology.
 THEODORA WHEELER, M.D., Clinical Assistant in Neurology.
 BENJAMIN I. WEININGER, M.D., Clinical Assistant in Neurology.

NEUROLOGY

19. **A Clinical and Conference Course at the Cook County Hospital.**—Limited to 20. M., Th., 9:00–11:00. 48 hours. .4Mj. Autumn and Winter, FAVILL; Spring, RICHTER.

20. **A Clinical and Conference Course at the Cook County Hospital.**—Similar to Course 19. W., Sat., 9:00–11:00. 48 hours. .4Mj. Summer, AVERY, MACKAY; Autumn and Winter, AVERY; Spring, MACKAY.

21. **Clinic at Rush Medical College.**—M., Th., 10:00–11:00. 24 hours. .2Mj. Autumn, HALL; Winter, GILL; Spring, BASSOE, HOFFMAN.

22. **Laboratory Work in Neuropathology.**—Hours by arrangement. Credit according to amount and quality of work done. Throughout the year. RICHTER.

PSYCHIATRY

A. PRELIMINARY COURSE

43. **Clinical and Conference Course in Central Free Dispensary: supplemented by visits to institutions.**—24 hours. .2Mj. W., 4:00–6:00. Summer, LARSON AND ASSOCIATES; Autumn, ROTMAN AND ASSOCIATES; Winter, LARSON; Spring, ROTMAN AND ASSOCIATES.

B. ADVANCED COURSES. PREREQUISITE COURSE 43

44. **Clinic at Cook County Psychopathic Hospital.**—24 hours. .2Mj. M., 4:00–6:00. Autumn, Winter, and Spring. KUH AND BRAUDE.

44B. **Clinic at Cook County Psychopathic Hospital.**—24 hours. .2Mj. Tu., 4:00–6:00. Autumn and Spring, GILL, ROTMAN.

45. **Ward Rounds at Cook County Psychopathic Hospital.**—Limited to 10. 24 hours. .2Mj. Tu., 4:00–6:00. Autumn, Winter, and Spring. KUH.

46. **Ward Rounds at Cook County Psychopathic Hospital.**—Limited to 10. 24 hours. .2Mj. W., 9:00–11:00. Autumn, Winter, and Spring. BRAUDE.

48. **Special Work in Psychiatry, including Child Guidance, Psychometric Tests, and Criminology.**—At Central Free Dispensary, supplemented by visits to Institute for Juvenile Research, Municipal Psychologic Laboratory, and prisons. Throughout the year by special arrangement. .2Mj. ROTMAN, LARSON, HOFFMAN.

THE DEPARTMENT OF PEDIATRICS

RUSH MEDICAL COLLEGE

OFFICERS OF INSTRUCTION

CLIFFORD GROSSELLE GRULEE, Chairman of the Department of Pediatrics.

CLIFFORD GROSSELLE GRULEE, A.M., M.D., LL.D., Clinical Professor of Pediatrics.

ARCHIBALD HOYNE, M.D., Associate Clinical Professor of Pediatrics.

ARTHUR HAWLEY PARMELEE, M.D., Associate Clinical Professor of Pediatrics.

FRANK WESLEY ALLIN, A.M., M.D., Assistant Clinical Professor of Pediatrics.

CHARLES KLAUS STULIK, M.D., Assistant Clinical Professor of Pediatrics.

ELEANOR I. LESLIE, M.D., Assistant Clinical Professor of Pediatrics.

HEYWORTH N. SANFORD, M.D., Assistant Clinical Professor of Pediatrics.

WILLIAM L. BUHRMAN, M.D., Clinical Instructor in Pediatrics.

JOHN JOSEPH ZAVERTNIK, M.D., Clinical Instructor in Pediatrics.

CRAIG D. BUTLER, M.D., Clinical Instructor in Pediatrics.

BERT I. BEVERLY, M.D., Clinical Instructor in Pediatrics.

FLORENCE M. MEADER-REES, M.D., Clinical Associate in Pediatrics.

JENNIE KANTOR-AMTMAN, M.D., Clinical Associate in Pediatrics.

NOEL GARNET SHAW, M.D., Clinical Associate in Pediatrics.

MARION M. CRANE, M.D., Clinical Associate in Pediatrics.

NORMAN T. WELFORD, M.D., Clinical Assistant in Pediatrics.

MITCHELL L. KRUPINSKI, M.D., Clinical Assistant in Pediatrics.

GORDON W. ELRICK, M.D., Clinical Assistant in Pediatrics.

MARION J. FILIPIAK, M.D., Clinical Assistant in Pediatrics.

THEODORE H. GASTEYER, M.D., Clinical Assistant in Pediatrics.

RALPH LEMASTER, M.D., Clinical Assistant in Pediatrics.

ERNEST S. WATSON, M.D., Clinical Assistant in Pediatrics.

IAN HUBERT BOND, A.B., M.D., Clinical Assistant in Pediatrics.

ANNA E. BOLLER, Ph.B., Clinical Assistant in Pediatrics (Dietetics).

KENNING MEREDITH ANDERSON, M.D., Clinical Assistant in Pediatrics.

COURSES OF INSTRUCTION

1. **Principles of Pediatrics.**—A conference and recitation course comprising the anatomy, physiology, and hygiene of infancy and childhood, and the dietetics of infancy and childhood. Required. Throughout the quarter. Tu., Sat., 8:00-9:00. Summer, WATSON; Autumn, GASTEYER AND LEMASTER; Winter, LEMASTER; Spring, WATSON.

2. **Lecture on Preventive Measures.**—Conference and recitation course. Required. 6 weeks. Every quarter. Th., 8:00-9:00. (To be taken in connection with Course 4.) SANFORD.

3. **Conference.**—Required. Throughout the year. Th., 12:00-1:00. 6 weeks. Each quarter. Summer, PARMELEE; Autumn, Winter and Spring, GRULEE.

4. **Contagious Disease.**—A conference and recitation course on contagious diseases. No limit in attendance. Required. F., 8:00-9:00. Once a week for six weeks. Summer, LEMASTER; Autumn and Spring, HOYNE.

4B. **Clinic in Contagious Diseases.**—Clinic in Contagious Department of Cook County Hospital. Elective. Limited to 12. Two hours a week for 6 weeks. Sat., 11:00-1:00. Autumn, Winter, and Spring. HOYNE, LEMASTER.

- 4C. Clerkship.**—Municipal Contagious Hospital. 1 week. Required.
- 7. Dispensary.**—A course in the Central Free Dispensary. Required. Equivalent to Course VIIA-50. 6 weeks. Each quarter. 9:00-11:00 daily. LEMASTER.
- 12. Pediatric Clinic.**—A clinic and conference course. Elective. Tu., F., 9:00-10:00. Summer, LESLIE; Autumn, Winter, and Spring, GRULEE.
- 13. Pediatric Clinic.**—A clinic and conference course. Elective, M., Th., 9:00-10:00. Summer, ———; Autumn, Winter, and Spring, PARMELEE.
- 14. Pediatric Clinic.**—A clinic and conference course. Elective. W., 9:00-10:00. Every quarter. SANFORD.
- 14A. Pediatric Clinic.**—Psychology problems of childhood. Elective. Sat., 9:00-10:00. Every quarter. BEVERLY.
- 15. Nutrition Clinic.**—A clinical and conference course at the Central Free Dispensary. Required. 6 weeks. M., W., Th., 2:00-4:00. Each quarter. LESLIE, KANTOR-AMTMAN.
- 15A. Nutrition Clinic.**—The feeding and care of children (two to six years of age). Required. 6 weeks. M., W., Th., 2:00-4:00. Each quarter. LESLIE.
- 15B. Nutrition Clinic.**—The feeding and care of older children (six to sixteen years of age). Required. 6 weeks. Sat., 9:00-11:00.
- 15C. Conference on Nutrition of Older Children including Diets and Preparation of Foods.**—F., 11:00-12:00. DR. ALLIN, MISS BOLLE.
- 16. Pediatric Clinic at the Cook County Hospital.**—A clinic and conference course at the Cook County Hospital. Elective. Tu., 7:00-9:00 P.M. Each quarter. STULIK, BUHRMAN.
- 17. Clinic on New-born Infants.**—A clinical demonstration course at Cook County Hospital dealing with normal new-born infants, the diseases of the new-born, the premature infant, and the care and management of the new-born. Elective. Limited to 10. Sat., 8:00-9:00 A.M. Autumn, Winter, and Spring. PARMELEE, BUTLER.
- 18. Nutrition.**—Class in food value. Lecture and laboratory course with practical experience in normal and therapeutic diets. Elective. W., 4:00-6:00.
- 19. Student Assistant in Serology and Therapeutics of Syphilis in Children.**—Practical work in intravenous and intramuscular injections of arsenical, bismuth, and mercurial preparations; intraperitoneal injections of neoarsphenamine and methods of drawing blood for Wassermann. Tu., 2:00-4:00. Throughout the quarter. .2Mj. Each quarter, SHAW.
- 19A. Course in Serology and Therapeutics of Syphilis in Children.**—Practical work in intravenous and intramuscular injections of arsenical, bismuth and mercurial preparations; intraperitoneal injections of neoarsphenamine and methods of drawing blood for Wassermann. Required. S., 2:00-4:00. 6 weeks. .4Mj. Each Quarter. SHAW.
- 20. Behavior Clinic.**—Required. 6 weeks. Tu., 11:00-1:00. Every quarter. BEVERLY, WELFORD, AND WATSON.
- 21. Posture Clinic.**—Required. 6 weeks. S., 9:00-11:00. Every quarter. ELRICK.
- 22. Dispensary Clinic in Infections of Genitalia in Female Children.**—Required. Limited to two students. One period, F., 11:00-1:00. Every quarter. BAUER.
- 23. Clinic on Preventive Measures in Childhood.**—Required. 6 weeks. F., 9:00-11:00. MEADER-REES AND CRANE. Every quarter.
- 24. Cook County Clinic.**—Required. 6 weeks. Tu., 2:00-4:00. Members of the Pediatric Faculty on the Cook County Staff.
- 25. Out-Patient New-born Service.**—In association with Obstetrics and Gynecology Course 5. Required. 6 weeks. Every quarter.
- 26. X-Ray Demonstration.**—Required. 6 weeks. M., 12:00-1:00. SQUIRE.
- 27. Dental Hygiene.**—3 weeks. Required. W., 11:00-12:00. NOYES.
- 28. General Clinic.**—Presbyterian Hospital (for Dispensary and Hospital clerks only). M., 11:00-12:00. Required. STULIK.

DEPARTMENT OF PEDIATRICS

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8:00 — 9:00		Course 1			Course 4 Hoyne Lect.	Course 1
9:00 — 9:30	Lect. 30	Lect. 30	Lect. 30	Lect. 30	Lect. 30	Disp. 7 or Hosp. 50 Clerk.
11:00	Disp. 7 or Hosp. 50 Clerk.	Disp. 7 or Hosp. 50 Clerk.	Disp. 7 or Hosp. 50 Clerk.	Disp. 7 or Hosp. 50 Clerk.	Disp. 7 or Hosp. 50 Clerk.	Nutrition, Allin; Posture, Elrick
11:00 — 12:00	*Stulik, 28	Beverly	Dental* Hygiene, Noyes, Sanford 29	Sanford, 2	Lecture, Allin	
12:00 — 1:00	X-Ray, Squires	Course 20	*Path., Apfelbach	*Grulee, 2	Course 4B or Bauer, Course 32 (20%)	Hoyne, C.C.H.
2:00 — 4:00	(Amtman) 15 and 15A	County Clinic 24	(Amtman) 15 and 15A	(Amtman) 15 and 15A	Meador-Rees, 23 (40%)	Shaw, 19A 20%

* Throughout the quarter.

A. Municipal Contagious Hospital. —Course 4C—1 week
B. Outpatient, New-Born —Course 25 (during Obst. Clerk.)

29. **General Clinic.**—Presbyterian Hospital (for Dispensary and Hospital clerks only). W., 11:00–12:00. (3 clinics each term). SANFORD.

30. **Lectures on Diseases of Children.**—(For Dispensary and Hospital clerks only). M., Tu., W., Th., F., 9:00–9:30. Members of Pediatric Faculty.

50. **Clinical Clerkship in Presbyterian Hospital.**—6 weeks. 9:00–1:00 daily. 144 hours. 1.5Mj. Limited to 6 students. Taken in combination with similar course in the Department of Obstetrics and Gynecology. Required. Equivalent to Course VIIA-7.

GRADUATE COURSE IN PEDIATRICS

A limited number of graduates will be accepted for work in Pediatrics. The course will be for two years. Applicants must have had at least one year's internship in a creditable hospital and must be approved by a department committee. For particulars apply to Clinical Professor Clifford G. Grulee.

THE DEPARTMENT OF SURGERY

RUSH MEDICAL COLLEGE

OFFICERS OF INSTRUCTION

ARTHUR DEAN BEVAN, Chairman of the Department of Surgery.

ARTHUR DEAN BEVAN, A.M., M.D., Nicholas Senn Clinical Professor.¹

VERNON CYRENIUS DAVID, M.D., Clinical Professor of Surgery.

KELLOGG SPEED, M.D., Clinical Professor of Surgery.

ROBERT HARRY HERBST, M.D., Clinical Professor of Surgery (Genito-urinary).

HERMAN LOUIS KRETSCHMER, M.D., Clinical Professor of Surgery (Genito-urinary).

CHARLES AUBREY PARKER, M.D., Associate Clinical Professor of Surgery (Orthopedic).

CARL BRADEN DAVIS, S.B., M.D., Associate Clinical Professor of Surgery.

FREDERICK BROWN MOOREHEAD, S.M., D.D.S., M.D., Associate Clinical Professor of Surgery (Oral and Dental).

ISABELLA COLER HERB, M.D., Associate Clinical Professor of Surgery (Anaesthetics).

ALBERT HERR MONTGOMERY, M.D., Associate Clinical Professor of Surgery.

GATEWOOD GATEWOOD, A.M., M.D., Associate Clinical Professor of Surgery.

EDWIN MORTON MILLER, M.D., Associate Clinical Professor of Surgery.

CASSIE BELLE ROSE, M.D., Associate Clinical Professor of Surgery (Radiology).

GEORGE GILBERT DAVIS, M.D., Associate Clinical Professor of Surgery.

ROGER THROOP VAUGHAN, M.D., Associate Clinical Professor of Surgery.

RALPH B. BETTMAN, A.B., M.D., Associate Clinical Professor of Surgery.

ELVEN JAMES BERKHEISER, M.D., Associate Clinical Professor of Surgery (Orthopedic).

GOLDER LEWIS McWHORTER, M.D., Ph.D., Assistant Clinical Professor of Surgery.

FRANCIS HOWE STRAUS, M.D., Assistant Clinical Professor of Surgery.

HARRY ALVIN OBERHELMAN, M.D., Assistant Clinical Professor of Surgery.

HUGH JAMES POLKEY, M.D., Assistant Clinical Professor of Surgery (Genito-urinary).

GEORGE HENRY JACKSON, JR., M.D., Assistant Clinical Professor of Surgery.

EDWARD BUCKMAN, M.D., Assistant Clinical Professor of Surgery (Genito-urinary).

DAVID C. STRAUS, M.D., Assistant Clinical Professor of Surgery.

ADRIAN VERBRUGGHEN, M.D., Assistant Clinical Professor of Surgery (Neuro-Surgery).

MARY M. LYONS, M.D., Assistant Clinical Professor of Surgery (Anaesthetics).

MERRILL H. KILLIP, D.D.S., Clinical Instructor in Surgery (Oral).

THOMAS COTTRELL, M.D., Clinical Instructor in Surgery (Genito-urinary).

HILLIER L. BAKER, M.D., Clinical Instructor in Surgery.

KAY L. THOMPSON, D.D.S., Clinical Instructor in Surgery (Oral).

ANDREW J. SULLIVAN, M.D., S.B., Clinical Instructor in Surgery (Genito-urinary).

KNOWLTON E. BARBER, M.D., Clinical Instructor in Surgery (Genito-urinary).

CHARLES GRAFTON WELER, M.D., Clinical Instructor in Surgery (Genito-urinary).

EARL ROACH MCCARTHY, M.D., Clinical Instructor in Surgery.

WILLIS J. POTTS, M.D., Clinical Instructor in Surgery.

FAY HUFFMAN SQUIRE, M.D., Clinical Instructor in Surgery (Radiology).

¹ The Nicholas Senn Professorship was founded in 1898 by the late Professor Nicholas Senn, with a gift to the college of \$25,000 for the promotion of higher medical education and the advancement of medical science. He was professor of the principles of surgery in Rush Medical College from 1889 to 1891 and professor of surgery from 1891 to 1908.

NORA B. BRANDENBURG, M.D., Clinical Instructor in Surgery (Anaesthetist).
 RANDOLPH OLMSTEAD, M.D., Clinical Associate in Surgery.
 JAY IRELAND, M.D., Clinical Associate in Surgery.
 DEAN L. RIDER, M.D., Clinical Associate in Surgery.
 FRANK VICTOR THEIS, M.D., Clinical Associate in Surgery.
 CHARLES DUSTIN PARKER, M.D., Clinical Associate in Surgery (Genito-urinary).
 WILMOT F. PIERCE, M.D., Clinical Associate in Surgery; Nicholas Senn Fellow.
 STANLEY E. LAWTON, M.D., Clinical Associate in Surgery.
 CHESTER A. PERRODIN, M.D., Clinical Associate in Surgery (Genito-urinary).
 NATHAN N. CROHN, M.D., Clinical Associate in Surgery.
 MARK LORING, M.D., Clinical Associate in Surgery.
 EDGAR C. TURNER, M.D., Clinical Associate in Surgery.
 ARTHUR E. DIGGS, M.D., Clinical Associate in Surgery.
 JOSEPH H. CHIVERS, M.D., Clinical Assistant in Surgery.
 ARTHUR SCHWARCZ, M.D., Clinical Assistant in Surgery (Genito-urinary).
 FRED SHAPIRO, M.D., Clinical Assistant in Surgery (Orthopedics).
 LOUIS F. PLZAK, M.D., Clinical Assistant in Surgery.
 GEORGE L. PERUSSE, M.D., Clinical Assistant in Surgery.
 NORRIS J. HECKEL, M.D., Clinical Assistant in Surgery (Genito-urinary).
 LEONARD J. SHERWIN, D.D.S., Clinical Assistant in Surgery (Oral).
 EURIPIDES NITTIS, M.D., Clinical Assistant in Surgery.
 ANTON FEHER, M.D., Clinical Assistant in Surgery.
 JAY EUGENE TREMAINE, S.B., M.D., Clinical Assistant in Surgery.
 LOUIS STEPHEN FARZINO, M.D., Clinical Assistant in Surgery (Orthopedic).
 GEORGE OTTO BAUMRUCKER, M.D., Clinical Assistant in Surgery (Genito-urinary).
 A. LOUIS ROSI, M.D., Thomson-Bevan Fellow in Surgery; House Surgeon, Presbyterian Hospital.
 RICHARD K. GILCHRIST, M.D., Francis A. Hardy Fellow in Surgery; House Surgeon, Presbyterian Hospital.

INTRODUCTORY

A total of 4 majors in surgery is required. The following courses are specifically required: 1, 2, 3, 5, and 50. In addition, the student should plan his clinical courses to include at least one clinic in each of the Regional Divisions.

DEBOTH LECTURESHIP IN SURGERY

A lectureship established by Miss Jessie M. DeBoth in memory of her brother, Edward Raymond DeBoth, provides for an annual lecture on some surgical topic.

COURSES OF INSTRUCTION

1. **Principles of Surgery and Surgical Pathology.**—A conference and laboratory course. M., Tu., Th., 11:00–12:00. 36 hours. .5Mj. Autumn and Spring, GATEWOOD, MONTGOMERY, McWHORTER, STRAUS, OBERHELMAN, MCCARTHY, POTTS, LORING.

2. **Principles of Surgery and Surgical Pathology.**—A conference and laboratory course. 36 hours. .5Mj. Winter, secs. *a* and *b*, M., Tu., Th., 11:00–12:00; and sec. *c*, M., Th., 4:00–6:00. Summer, M., Tu., Th., 11:00–12:00, GATEWOOD, MONTGOMERY, McWHORTER, STRAUS, OBERHELMAN, MCCARTHY, POTTS, LORING.

3. **Surgical Anatomy and Operative Surgery on the Cadaver.**—A demonstration and operative course. Sec. *a*, M., Th., 11:00–1:00; sec. *b*, Tu., F., 11:00–1:00. 48 hours.

.4Mj. Autumn, and Spring, MILLER, GATEWOOD, MONTGOMERY, McWHORTER, STRAUS, BAKER, AND POTTS.

4. **Genito-urinary Surgery.**—A recitation and conference course for Juniors, given to the class in sections. 24 hours. .4Mj. Spring, W., 4:00–6:00, POLKEY, BUCKMAN.

5. **Clinical Surgery (Central Free Dispensary).**—Including bandaging, surgical dressings, and surgical appliances. Daily, 11:00–1:00. 48 hours. .4Mj. Each quarter throughout the year. Sec. *a*, M., Th.; sec. *b*, Tu., F.; sec. *c*, W., Sat. Each section limited to 12 students. JACKSON, MCCARTHY, IRELAND, POTTS, LAWTON, THEIS, RIDER, PERUSSE, LORING, DIGGS, PLZAK, PIERCE, TREMAINE, FEHER, NITTIS.

This course may be elected by Junior students after one quarter's residence in the clinical years during which other courses in surgery have been taken.

14. **Bone and Joint Surgery.**—A clinical course at the Central Free Dispensary. .4Mj. Summer, Autumn, Winter and Spring. 48 hours. Sec. *a*, M., Th., 2:00–4:00; sec. *b*, Tu., F., 2:00–4:00; sec. *c*, W., Sat., 2:00–4:00. SPEED, PARKER, BERKHEISER, RIDER, TURNER, FARZINO.

II. JUNIOR AND SENIOR YEARS

6. **Clinical Surgery.**—A clinical and conference course in general surgery, with special reference to and examination in the surgery of the abdomen. This course includes instruction in the administration of anaesthetics. 11:00–12:00, M., and Th., Tu. and F. 24, 36, or 48 hours. .2, .3, or .4Mj. Autumn, BEVAN, DAVIS, AND ASSOCIATES.

7. **Surgical Physiology.**—A conference and demonstration course in physiology and biochemistry as applied to clinical surgery. 12 hours. .1Mj. Autumn and Spring, Tu., 12:00–1:00, STRAUS.

8. **Clinical Surgery.**—A clinical and conference course in general surgery, fractures, and dislocations, which includes instruction in the administration of anaesthetics. M., Tu., Th., F., 11:00–12:00. 24, 36 or 48 hours. .2, .3, or .4Mj. Winter, DAVID, SPEED.

10. **Clinical Surgery.**—A clinical and conference course in general surgery, neuro-surgery, and oral surgery, which includes instruction in the administration of anaesthetics. 11:00–12:00. 24, 36 or 48 hours. .2, .3 or .4Mj. Spring, M., BEVAN, General Surgery; Th., VERBRUGGHEN, Neuro-surgery; Tu., GATEWOOD, General Surgery; F., MOOREHEAD, Oral Surgery.

12. **Clinical Surgery.**—A clinical and conference course in general surgery which includes instruction in the administration of anaesthetics. M., Tu., Th., and F., 11:00–12:00. 24, 36, or 48 hours. .2, .3, or .4Mj. Summer, MONTGOMERY, MILLER, STRAUSS, OBERHELMAN.

13. Laboratory and research work may be elected by a limited number of students in the laboratories of Surgical Pathology, and credit in proportion to the character and length of course may be granted, but not to exceed .4Mj. in any one quarter. OBERHELMAN, PIERCE.

16. **Practical Course in Operative Surgery on Animals**—Given to the class in sections. Limited to 32 students. Sec. *a*, M., 11:00–1:00; sec. *b*, Tu., 11:00–1:00. 24 hours. .2Mj. Summer and Autumn, MILLER, McWHORTER, STRAUS, BAKER, MCCARTHY.

17. **Genito-urinary Diseases (Central Free Dispensary).**—A clinical and conference course in diseases of the genito-urinary tract. Sec. *a*, M., Th.; sec. *b*, Tu., F., sec. *c*, W., Sat., 4:00–6:00. 48 hours. .4Mj. Summer, Autumn, Winter and Spring, HERBST, KRETSCHMER, POLKEY, COTTRELL, BUCKMAN, SULLIVAN, BARBER.

18. **Clinical Course of the Cook County Hospital.**—Topic: Thoracic Surgery. Tu., 2:00–4:00. 24 hours. .2Mj. Autumn and Spring, BETTMAN.

19. **Clinical Course at the Cook County Hospital.**—Fractures. Class limited to 10. Th., 11:00–1:00. 24 hours. .2Mj. Autumn and Spring, POTTS.

20. **Clinical Course at the Cook County Hospital.**—Topic: General Surgery. Class limited to 10 students. F., 11:00–1:00. 24 hours. .2Mj. Autumn and Spring, DAVID; Summer and Winter, ———.

21. Clinical Course at the Cook County Hospital.—Class limited to 10. F., 11:00–1:00. 24 hours. .2Mj. Summer and Winter, MONTGOMERY.

22. Clinical Course at the Cook County Hospital.—General Surgery. Class limited to 10 students. Tu., 7:00–9:00 P.M. 24 hours. Each quarter. VAUGHAN.

23. Clinical Course at the Cook County Hospital.—Topic: General Surgery, with Special Reference to Spinal Column and Cord; G. G. DAVIS. Brain Surgery; VERBRUGGHEN. W., 4:00–6:00. 24 hours. .2Mj. Autumn, Winter.

25. Orthopedic Clinic at the Cook County Hospital.—Clinical course, with special reference to the orthopedic affections of adults. M., Th., 2:00–4:00. 48 hours. .4Mj. Each quarter. BERKHEISER.

27. Clinical Course at the Cook County Hospital.—Class limited to 10. Autumn, Winter, Spring, W., 11:00–1:00. 24 hours. .2Mj.

28. Clinical Course at the Cook County Hospital.—Class limited to 10. 24 hours. Autumn, Winter, Spring, M., 11:00–1:00. .2Mj. MILLER.

29. Operative Surgery for Postgraduates.—On dogs, surgery of the abdomen. On the cadaver, surgery of the head, neck, thorax and extremities. Four weeks, beginning July 1 and August 1. M., W., F., 4:00–6:00. Other days or months by special arrangement. Limited to 4 or 8. MCWHORTER.

30. Anaesthetics.—A conference and demonstration course on the administration of anaesthetics. S., 2:00–3:00. .1Mj. Autumn and Spring, Second Term, HERB.

33. Roentgenology.—A conference and demonstration course on the use of the X-ray in diagnosis and treatment, and on the general principles of radiographic technique. Limited to 25. W., 2:00–4:00. .4Mj. Autumn, Winter, and Spring, ROSE.

34. Genito-urinary Surgery.—A clinical and conference course in diseases of the genito-urinary tract. W., 11:00–1:00. 24 hours. .2Mj. Autumn, HERBST, KRETSCHMER.

50. Clinical Clerkship in Presbyterian Hospital.—6 weeks. 9:00–4:00 daily. 252 hours. 1.5Mj. Limited to 20. Taken in combination with similar course in the Department of Medicine. The student will work in the wards of the hospital under supervision of the staff of the hospital. His work will include taking of the history and the examination of the patient, the making of routine laboratory examinations, observations of the course of the disease and of such operations as may be necessary, and study of other therapeutic methods employed.

50A. Clinical Clerkship in Cook County Hospital.—(Same as Course 50.) Limited to 14.

50B. Clinical Clerkship in Michael Reese Hospital.—(Same as Course 50.) Limited to 12.

50C. Clinical Clerkship in Washington Boulevard Hospital.—(Same as Course 50.) Limited to 4.

THE DEPARTMENT OF OBSTETRICS
AND GYNECOLOGY
RUSH MEDICAL COLLEGE

OFFICERS OF INSTRUCTION

NOBLE SPROAT HEANEY, Chairman of the Department of Obstetrics and Gynecology.

JOHN CLARENCE WEBSTER, M.D., F.R.C.P. (Edin.), ScD., LL.D., Professor Emeritus of Obstetrics and Gynecology.

NOBLE SPROAT HEANEY, A.B., M.D., Clinical Professor of Obstetrics and Gynecology.

CAREY CULBERTSON, A.B., M.D., Associate Clinical Professor of Obstetrics and Gynecology.

JOSEPH LOUIS BAER, S.M., M.D., Associate Clinical Professor of Obstetrics and Gynecology.

AARON ELIAS KANTER, S.M., M.D., Associate Clinical Professor of Obstetrics and Gynecology.

PAUL CHRISTOPHER FOX, S.B., M.D., Assistant Clinical Professor of Obstetrics and Gynecology.

EDWARD DUDLEY ALLEN, S.B., M.D., Assistant Clinical Professor of Obstetrics and Gynecology.

CARL PHILIP BAUER, S.B., M.D., Assistant Clinical Professor of Obstetrics and Gynecology.

ALICE MCNEAL, S.B., M.D., Assistant Clinical Professor of Obstetrics and Gynecology (Anaesthetics).

GEORGE FIELDING HIBBERT, S.B., M.D., Clinical Instructor in Obstetrics and Gynecology.

GERRITT COTTS, S.B., M.D., Clinical Instructor in Obstetrics and Gynecology.

ALEXANDER GAREGIN GABRIELIANZ, M.D., Clinical Instructor in Obstetrics and Gynecology.

HOWARD JEAN HOLLOWAY, S.B., M.D., Clinical Instructor in Obstetrics and Gynecology.

DOROTHY EDWARDS, S.B., M.D., Clinical Associate in Obstetrics and Gynecology.

ELLIS SCHWEID, M.D., Clinical Associate in Obstetrics and Gynecology.

CARL THOMPSON STEPHAN, S.B., M.D., Clinical Associate in Obstetrics and Gynecology.

ARTHUR HERMAN KLAUANS, S.B., M.D., Clinical Associate in Obstetrics and Gynecology.

EARL EMANUEL MADDEN, S.B., M.D., Clinical Associate in Obstetrics and Gynecology.

RICHARD I. TORPIN, A.B., M.D., Clinical Associate in Obstetrics and Gynecology.

BENJAMIN W. BREISTER, M.D., Clinical Assistant in Obstetrics and Gynecology.

HARRY W. FINK, M.D., Clinical Assistant in Obstetrics and Gynecology.

†EDWARD J. STONE, M.D., Clinical Assistant in Obstetrics and Gynecology.

† Deceased.

INTRODUCTORY

The subjects of Obstetrics and Gynecology are taught in the Junior and Senior years in recitation, and conference courses in Dispensary and Hospital clinics, and in the conduct of labor in the homes of patients. The total requirement is 3 majors.

COURSES OF INSTRUCTION

JUNIOR YEAR

1. Conference and Demonstration Course in Obstetrics and Gynecology.—The female pelvis and genitalia, puberty and menstruation, anatomy, physiology, the diagnosis of pregnancy, management of normal pregnancy, physiology and clinical course of normal labor, and the puerperium, mechanism in vertex presentation. Mechanism in face, brow, pelvic, and shoulder presentations, the new-born child, multiple pregnancy, obstetric operations and manipulations, induced termination of pregnancy. Limited to 35 in each section. Autumn and Spring, W., F., S., 11:00–12:00. .6Mj. BAER, FOX, BAUER, HIBBERT.

2. Conference and Demonstration Course in Obstetrics.—Forceps, version, operations for enlarging the pelvic diameters, caesarean section, embryotomy, manikin demonstrations; pathology of pregnancy, the toxemias, ectopic gestation, premature expulsion and diseases of ovum, pathology of labor, anomalies of expellent forces, soft passages, bony pelvis and fetus, the hemorrhages, injuries of birth canal, prolapse of cord, pathology of puerperium, diseases and abnormalities, sepsis. Prerequisite: course 1. Winter and Summer. W., F., S., 11:00–12:00, or Tu., F., 4:00–6:00. .6Mj. BAER, FOX, ALLEN, BAUER, HOLLOWAY.

3. Conference Courses in Gynecology.—Gross anatomy of the internal and external genitalia; menstruation and its disorders; history-taking; symptoms in gynecology; methods of examination; anomalies of the genital tract; malpositions of the uterus; acute and chronic infections of the internal and external genitalia; new growths of the uterus, tubes, and ovaries. 24 hours. .4Mj. Gynecology. Autumn, M., Th., 12:00–1:00, KANTER; Winter, M., Th., 12:00–1:00, ALLEN; Spring, Tu., F., 4:00–5:00 BAER; Summer, M., Th., 11:00–12:00, BAUER.

5. Clinical Obstetrics.—In the maternity department of the Presbyterian Hospital, Chicago Lying-in Dispensary, Central Free Dispensary, and Michael Reese Hospital. Attendance upon cases of confinement in various hospitals and at the homes of patients is required of each student before graduation. Each student will be summoned to cases at the time of delivery and will attend the patients during and after delivery under supervision. Clinical records must be kept by students and certificates obtained. Prerequisite: courses 1, 2, and 3. .4Mj. Throughout the year. HEANEY, BAUER. *Nurses:* MABEL W. HUBBARD, ELPHIA N. FLUGUM.

6. Conference and Demonstration Course.—A gross and microscopic study of the female genitalia, both normal and pathologic, including the changes found in menstruation and in pregnancy. Limited to 15. Each quarter, W., Sat., 11:00–1:00. 48 hours. .4Mj. (Obstetrics .2Mj.; Gynecology .2Mj.). CULBERTSON, KANTER, FOX, ALLEN.

8. Dispensary Clinics.—Conferences in practical gynecology. Prerequisite: course 1 or 6. Limited to 8 in each section. 24 hours. .2Mj., each term throughout the year. Sec. *a*, M., Th., 11:00–1:00, FOX, BAUER, MADDEN; sec. *b*, Tu., F., 11:00–1:00, ALLEN, COTTS; sec. *c*, W., S., 11:00–1:00, HIBBERT, GABRIELIANZ, SCHWEID.

SENIOR YEAR

9. Clinic.—Gynecology and Obstetrics. Prerequisite: course 1 or 6. 24 hours. .2Mj. (Obstetrics .1Mj.; Gynecology .1Mj.). Each quarter throughout the year. W., Sat., 11:00–12:00, HEANEY, KANTER.

10. Clinical Course at the Cook County Hospital.—A clinical course in Gynecology. Limited to 15. Tu., F., 11:00–12:00. 24 hours. .2Mj. Gynecology. Autumn, Winter, and Spring, CULBERTSON.

10A. Clinical Course at the Cook County Hospital.—A clinical course in Gynecology. Limited to 15. M., Th., 11:00–12:00. 24 hours. .2Mj. Gynecology. Autumn and Spring, KANTER.

12. Special Laboratory Work.—For a limited number of students selected by the Department staff.

50. Clinical Clerkship in Presbyterian Hospital.—6 weeks. Students to be on call full 24-hour period. 1.5Mj. Limited to 20. Taken in combination with similar course in the Department of Pediatrics. The student will work in the wards of the hospital under supervision of the staff of the hospital. His work will include the taking of histories, the examination of patients, the making of routine laboratory examinations, and observation of the course of disease and of such operations as may be necessary, and study of other therapeutic methods employed.

THE DEPARTMENT OF LARYNGOLOGY AND OTOTOLOGY

RUSH MEDICAL COLLEGE

OFFICERS OF INSTRUCTION

GEORGE ELMER SHAMBAUGH, Chairman of the Department of Laryngology and Otology.

GEORGE ELMER SHAMBAUGH, PH.B., M.D., Clinical Professor of Laryngology and Otology.

ELMER LAWTON KENYON, A.B., M.D., Assistant Clinical Professor of Laryngology and Otology.

GEORGE ABRAHAM TORRISON, A.B., M.D., Assistant Clinical Professor of Laryngology and Otology.

ROBERT SONNENSCHNEIN, M.D., Assistant Clinical Professor of Laryngology and Otology.

THOMAS WILLIAMS LEWIS, S.B., M.D., Assistant Clinical Professor of Laryngology and Otology.

DANIEL BERNARD HAYDEN, A.M., M.D., Assistant Clinical Professor of Laryngology and Otology.

†EDWIN MCGINNIS, A.B., M.D., Assistant Clinical Professor of Laryngology and Otology.

ELMER WILLIAM HAGENS, M.D., Clinical Instructor in Laryngology and Otology and Stanton Abeles Friedberg Fellow.

RICHARD W. WATKINS, S.B., M.D., Clinical Instructor in Laryngology and Otology.

LOUIS T. CURRY, S.B., M.D., Clinical Instructor in Laryngology and Otology.

WILLIAM J. YONKER, M.D., Clinical Instructor in Laryngology and Otology.

CLIFFORD L. DOUGHERTY, M.D., Clinical Instructor in Laryngology and Otology.

PALMER GOOD, M.D., Clinical Instructor in Laryngology and Otology.

LINDEN J. WALLNER, M.D., Clinical Associate in Laryngology and Otology.

FRANK WOJNIAK, M.D., Clinical Associate in Laryngology and Otology.

GEORGE E. SHAMBAUGH, JR., M.D., Resident in Laryngology and Otology, Presbyterian Hospital; Clinical Associate in Laryngology and Otology.

INTRODUCTORY

UNDERGRADUATE INSTRUCTION

The work in this department aims to provide for undergraduate students such practical training as should fit them to make the ordinary examinations required in the general study of patients and the opportunity to gain some knowledge of the clinical problems which the specialist in otolaryngology has to meet.

A total of .8 major is required in the Department.

COURSES OF INSTRUCTION

1. **Nose, Throat, and Ear.**—Clinical and practical course in Dispensary. Technic of examination and objective study of the normal and commoner pathological conditions of the nose, throat, and ear; also intubation of the larynx. For Juniors. Three sections, each limited to 12. Each quarter. 48 hours. 4Mj. 2:00-4:00. Sec. *a*, M., Th.; sec. *b*, Tu., F.; sec. *c*, W., Sat.

† Deceased.

2. Nose, Throat, and Ear.—Lecture and conference course for Seniors. Prerequisite: Course 1. M., Th., 4:00. 4Mj. Nose and Throat, 16 hours; Ear, 8 hours. Two hours will be devoted to defects of speech by Dr. Kenyon. Summer: Nose and Throat, DOUGHERTY; Ear, YONKER; Autumn: Nose and Throat, WATKINS; Ear, WOJNIAK; Winter: Nose and Throat, SONNENSCHEN; Ear, HAGENS; Spring: Nose and Throat, WALLNER; Ear, SHAMBAUGH, Jr.

3. Student Assistants in Industrial Clinic.—Tu., F., 7:00–9:00 P.M. Two students. This work can be substituted for Course 1.

For students who desire to take extra work in Otolaryngology:

4. Special Work for Three Student Assistants in the Dispensary.—Open to Juniors and Seniors who have had Course 1. 2:00–4:00. 48 hours. 4Mj. M., Th., one student; Tu., F., one student; W. S., one student. Students desiring to take this course should apply to the Chairman of the Department.

5. Ward Walks.—Cook County Hospital. For six students. 8:00–10:00 A.M. 48 hours. 4Mj. M., Th., two students; Tu., F., two students; W., S., two students. CURRY AND ASSOCIATE.

GRADUATE INSTRUCTION

The Department of Otolaryngology offers a course of graduate instruction consisting of one year's full-time work. The aim is to provide the first or fundamental year in preparation for practice in the specialty. This preparation includes the clinical study of patients as well as work in the fundamental sciences, particularly anatomy and pathology. The course is arranged so that a half of each day is devoted to the clinical study of patients, the other half to work in the fundamental sciences. The College aims to provide facilities for doing this work under proper supervision and direction while the student does his work independently, that is, without relying on forced instruction, didactic lectures, quizzes, etc.

There are places for twelve men in this graduate course, three men coming in each quarter—January, April, July, and October. On the satisfactory completion of the year's work the University of Chicago grants a certificate stating that this work has been done.

PROSPECTUS OF COURSES

FORENOONS

The *first quarter* is spent in the anatomical laboratory at Rush Medical College making dissections of the head and neck.

The *second quarter* is spent making a detailed study, with drawings, of gross preparations of the nose, throat, and ear. Material for this study is provided by the department.

During the *third quarter* the student attends ward walks in the Cook County Hospital, does work in surgical anatomy, spends two mornings each week in the allergy clinic, and makes anatomical preparations of the temporal bone and sinuses.

The *fourth quarter* is spent in a study of microscopic preparations of the normal and pathological conditions of the ear, nose, and throat from material provided by the department. Ward walks at Cook County Hospital are continued.

AFTERNOONS

The afternoons are spent by the graduate students in the clinical study of patients, the students serving as clinical assistants in the Department of Otolaryngology of the Central Free Dispensary, where their work is supervised and directed and where they are permitted to share in the responsibility of the care of patients.

The *first quarter* is spent in the study of patients in the room set aside for patients with nose and throat troubles, learning how to make careful examinations and to prepare proper clinical records.

The *second quarter* is spent in the ear department in the same manner.

The *third quarter* is spent assisting in the operating rooms and receiving instruction in operative technique, taking care of ambulatory patients requiring special treatment, such as minor operations, removing nasal polypi, irrigating sinuses, etc.

During the *fourth quarter* the students are taught the technique of operations and are permitted to do some of the routine operating such as tonsil enucleation, submucous resection of deviated septa, etc.

Special instruction is offered as follows:

Operative Surgery of the Ear, Nose, and Throat.—F., 9:00–11:00. For graduate students during the third quarter. Summer, WALLNER; Autumn, SHAMBAUGH, JR.; Winter, WALLNER; Spring, SHAMBAUGH, JR.

Special Anatomy of the Ear, Nose, and Throat.—W., 9:30–12:00. For graduate students during the first and second quarters. GOOD.

Anatomy of the Central Nervous System.—W., 8:00–10:00. For all graduate students. Autumn, WATKINS.

Allergy Clinic.—Tu., F., 9:00–11:00. For third-quarter students. FORAN.

Ward Walks.—Cook County Hospital. Daily, 8:00–10:00 A.M. For graduate students during the third and fourth quarters. CURRY AND ASSOCIATE.

Bronchoscopy and Suspension Laryngoscopy.—Hours to be arranged. For graduate students during the third and fourth quarters. Summer, HAGENS; Winter, CURRY.

Functional Examination of Hearing.—Th., 1:00–2:00. For all graduate students. Winter, SONNENSCHNEIN.

Speech Defects.—M., Th., 1:00–2:00. For all graduate students. Spring, KENYON.

Intubation.—F., 4:00–5:00. For all graduate students. Spring, TORRISON.

The position of resident in otolaryngology in the Presbyterian Hospital, length of service one year, is given to a graduate student on completion of this year's work.

A research fellowship in otolaryngology, the Stanton Abeles Friedberg Fellowship, is given to a student who has completed his hospital year and is devoting his entire time to the study of otolaryngology.

THE DEPARTMENT OF OPHTHALMOLOGY

RUSH MEDICAL COLLEGE

OFFICERS OF INSTRUCTION

WILLIAM FRANKLIN MONCREIFF, Chairman of the Department of Ophthalmology.

WILLIAM HAMLIN WILDER, A.M., M.D., Professor Emeritus of Ophthalmology.

WILLIAM FRANKLIN MONCREIFF, S.M., M.D., Associate Clinical Professor of Ophthalmology.

CHARLES GILCHRIST DARLING, M.D., Associate Clinical Professor of Ophthalmology.

THOMAS DYER ALLEN, M.D., Associate Clinical Professor of Ophthalmology.

EARLE BLOODGOOD FOWLER, M.D., Associate Clinical Professor of Ophthalmology.

ROBERT VON DER HEYDT, M.D., Associate Clinical Professor of Ophthalmology.

BERTHA KLIEN, M.D., Assistant Professor of Ophthalmology.

ELIAS SELINGER, M.D., Assistant Clinical Professor of Ophthalmology.

GEORGIANA DVOŘÁK THEOBALD, M.D., Clinical Instructor in Ophthalmology.

VERNON MAYNE LEECH, M.D., Clinical Instructor in Ophthalmology.

BEULAH CUSHMAN, M.D., Clinical Instructor in Ophthalmology.

MAX M. JACOBSON, M.D., Clinical Instructor in Ophthalmology.

CYRIL V. CRANE, M.D., Clinical Associate in Ophthalmology.

RICHARD A. PERRITT, M.D., Clinical Assistant in Ophthalmology.

INTRODUCTORY

UNDERGRADUATE COURSES

A total of 1 Mj. in Ophthalmology is required for graduation.

The courses for undergraduate students are designed to present an adequate view of the scope of modern ophthalmology, and to stress especially its relationships to other fields of medicine, particularly neurology and internal medicine. The usual methods of external examination and ophthalmoscopy are taught, but no instruction is given to undergraduates in the technic of refraction procedures or surgical operations.

A comprehensive didactic course (1), with demonstration and projection material, is given by preference in advance of the clinical and laboratory course (2), in which latter course the attempt is constantly made to correlate clinical phenomena with demonstrable pathologic, especially histologic changes, making use of the excellent collection of histological material which has been recently developed in the Department.

Extramural clinical courses are offered as electives for those undergraduates who wish further opportunity for the study of clinical material.

COURSES OF INSTRUCTION

REQUIRED COURSES

1. **Didactic and Demonstration Course.**—24 hours. .4Mj. Autumn and Spring.

2. **Clinical and Laboratory Course.**—Each quarter. Each section limited to 12. Each student must provide himself with an ophthalmoscope. 48 hours. .6Mj. Sec. *a*, M., Th., 2:00–4:00; sec. *b*, Tu., F., 2:00–4:00; sec. *c*, W., Sat., 2:00–4:00.

ELECTIVE COURSES

3. **Clinical Courses at the Cook County Hospital.**—Prerequisite: Courses 1 and 2. Each quarter. Each section limited to 10. 24 hours. .2Mj.

4. **Clinical Course at the Illinois Charitable Eye and Ear Infirmary.**—Prerequisite: Courses 1 and 2. Autumn, Winter, Spring. Each Section limited to 10. 24 hours. .2Mj.

GRADUATE COURSES

Opportunity for graduate work is offered to a limited number of physicians desiring to fit themselves for the special practice of ophthalmology.

The Department can accommodate eight such graduate students, two entering each quarter—January, April, July, and October. These courses cover a period of four quarters.

During one quarter or more, the forenoons are devoted to courses on the fundamental subjects of anatomy, physiology, neurology, and pathology as they pertain to the eye, this work being done in the laboratories of the University of Chicago. During the remaining three quarters the forenoons will be spent in clinical work in the eye clinic of the Central Free Dispensary and in the Eye Service at the Cook County Hospital.

For the entire duration of the course, the afternoons will be devoted to the clinical study of patients in the Eye Dispensary, under the guidance of the instructors. Special attention is devoted to methods of examination.

A new and valuable feature is a comprehensive didactic and laboratory course in Ophthalmology which is given twice a year; in the Spring Quarter for students entering in January and April, and in the Autumn Quarter for those entering in July and October.

Detailed description of the character of these courses is given in a special bulletin which will be mailed on request.

THE DEPARTMENT OF DERMATOLOGY

RUSH MEDICAL COLLEGE

OFFICERS OF INSTRUCTION

OLIVER SAMUEL ORMSBY, Chairman of the Department of Dermatology.

OLIVER SAMUEL ORMSBY, M.D., Clinical Professor of Dermatology.

EDWARD ALLEN OLIVER, M.D., Associate Clinical Professor of Dermatology.

JAMES HERBERT MITCHELL, M.D., Associate Clinical Professor of Dermatology.

CLARK WYLIE FINNERUD, M.D., Assistant Clinical Professor of Dermatology.

MICHAEL HIGGINS EBERT, M.D., Assistant Clinical Professor of Dermatology.

JOHN FRANK WAUGH, M.D., Clinical Instructor in Dermatology.

MARION SHELLEY FINK, M.D., Clinical Instructor in Dermatology.

RUBEN NOMLAND, M.D., Fellow in Dermatology (James Nevins Hyde Memorial Fund);
Clinical Instructor in Dermatology.

EDWARD A. SKOLNIK, M.D., Clinical Assistant in Dermatology, Director of Syphilis
Clinic.

INTRODUCTORY

A total of 1 Mj. is required in Dermatology—for graduation. Instruction is given by clinical teaching in the College, the Dispensary, and the Cook County Hospital by recitations and by demonstrations to small classes of clinical, bacteriologic, and pathologic phenomena.

Instruction in this Department is supplemented by ample use of the large collection of dermatological plates, atlases, and photographs, also by the use of the Baretta Models.

COURSES OF INSTRUCTION

1. Dermatology and Syphilis.—A recitation and conference course given to the class in sections not exceeding 25. Tu., F., 4:00–5:00. 24 hours. .4Mj. Summer, FINK; Autumn, MITCHELL; Winter, EBERT; Spring, NOMLAND.

2. Clinical Courses.—A clinical course on the subject of dermatology and syphilis. The clinic has been conducted in the College for many years and is attended by a large number of out-patients of both sexes and all ages. Each quarter throughout the year. Tu., F., 2:00–4:00. 48 hours. .4Mj. Autumn, ORMSBY; Winter, MITCHELL; Spring, OLIVER; Summer, FINNERUD.

3. Clinical Course in the Central Free Dispensary.—A clinical course given to the class in small sections in the departments of dermatology and syphilis in the Central Free Dispensary. The student is here brought in personal contact with patients and required to examine and prescribe for them as in private practice. Limited to 10 in each section. Each term throughout the year, 2:00–4:00. 24 hours. .2Mj. Sec. a, M., Th., Autumn and Spring, WAUGH; Winter and Summer, NOMLAND; sec. c, W., S., Autumn, Spring, FINNERUD; Summer, FINK; Winter, OLIVER.

4. Student Assistant in the Dispensary.—Provision is made for three students to assist in the Dispensary each quarter, one M. and Th., one Tu. and F., and one W. and S. 48 hours. .4Mj.

4A. Course in Syphilis.—Work as student assistant in the Evening Clinic in the Central Free Dispensary. Opportunity is afforded for special training in the methods of diagnosis and treatment of syphilis. Prerequisite: course 1. Limited to 2. Each quarter, F., 7:00–9:00. .2Mj. OLIVER.

5. **Syphilis.**—A clinical and lecture course comprising a general survey of the subject of syphilis. F., 4:00. 12 hours. .2Mj. Each quarter, EBERT.

5A. **Cook County Hospital Clinics.**—A clinic and conference course at the Cook County Hospital on diseases of the skin and syphilis. Each quarter. M., 2:00–4:00. .2Mj. EBERT.

7. **Student Assistant in Serology and Therapeutics of Syphilis.**—Practical work in intravenous and intramuscular injections of arsenical, bismuth, and mercurial preparations. Limited to 6. First Term, 2:00–4:00, twice weekly; Second Term, 2:00–4:00, twice weekly. .2Mj. Days to be arranged. Autumn, Winter, and Spring, SKOLNIK.

8. **Histopathology and Bacteriology of the Skin.**—A practical laboratory course arranged for students desiring special instruction in this Department. 4 hours weekly, Autumn and Spring. Hours to be arranged. FINNERUD.

GRADUATE COURSE IN DERMATOLOGY AND SYPHILIS

A limited number of graduates will be accepted for work in Dermatology and Syphilis. For the present the course may be for either one or two years. Applicants must be approved by a department committee. For particulars apply to Clinical Professor Oliver S. Ormsby.

SPECIAL CHARGES, RENTALS, GENERAL EXPENSES¹

SPECIAL CHARGES

A. In the School of Medicine at the University. Laboratory apparatus and supplies.—

(a) Students in laboratory courses are required to purchase at the office of the Bursar adequate breakage and supply tickets to be deposited as follows: for courses in Chemistry, with the Curator of Kent Chemical Laboratory; for courses in Physiology, Physiological Chemistry, Botany, Zoölogy, Anatomy, Pathology, and Hygiene and Bacteriology, at the laboratory supply store in Room 25 of the New Physiology Building. New tickets must be purchased at the opening of each quarter, and a refund of the unused balance on the old tickets can be obtained at that time. In courses requiring the use of a microscope, a rental fee, varying with the type of the instrument, is charged, if microscopes are rented. (b) A student may procure a skeleton from the Osteological Store Room on payment of a deposit of \$50, or parts of a skeleton on payment of special deposits. The deposit will be refunded when the skeleton (or part) is returned uninjured. Credit for courses in Gross Anatomy will not be reported until all material drawn from the Osteological Store Room is returned. The necessary textbooks may be purchased at the University of Chicago Bookstore in Ellis Hall. (c) A fee of \$10 is charged for special departmental examinations given to a student who has previously failed; \$20 if the student has failed twice before.

B. In Rush Medical College.—(1) A compound microscope is required for some of the clinical courses. *Every student is strongly advised to purchase a good microscope, with an immersion lens, in order that he may become familiar with the same instrument which he will use after his graduation.* Students not possessing a microscope may rent one from the College at a cost of \$3.50 a quarter. Each student is required to secure, for use in the clinical laboratories, a hemacytometer (cost, about \$16) and a hemoglobinometer. (2) A fee of \$20 is paid for the out-patient obstetrical work. (3) No student can be assigned to any college work until his fees are paid. (4) The annual ticket for the County Hospital is \$5, which is procured from the Office at the College.

Deposit.—A deposit of \$5 is required from each student to cover the cost of unnecessary damage in the College buildings and of avoidable loss and breakage in the laboratories. Deductions will be made from this deposit to cover the cost of articles not returned or of damage to College property. Each student will be charged for damage or loss for which he is individually responsible and for his prorata share of damage or loss, the responsibility for which cannot be individually located. The deposit must be made on entering the College.

UNIVERSITY RESIDENCE HALLS

HALLS FOR MEN

The College Residence Halls for Men

The College Residence Halls for Men are located at Sixtieth Street and Ellis Avenue. They are built around two courts, Judson and Burton, each with its own entrance, club-room, dining-hall, and court. Each hall accommodates from forty to sixty students.

¹ For tuition fees, see p. 12.

The single rooms are fitted as a combination study and bedroom. Each of the suites of two rooms, consisting of a study and a bedroom, accommodates one or two students. Fireplaces and in some cases private baths add to the attractiveness of some of these suites. All of the rooms are completely furnished with the exception of towels.

Quarterly rates cover meals in the dining halls, use of study or suite; such recreational facilities as the library, clubroom, and playing fields. The rates range from \$140 to \$150 an academic quarter for a combination bedroom and study. For suites of a study and a bedroom the quarterly rates range from \$142 to \$214 a man if the suite is occupied by two, or from \$207 to \$315 if the suite is occupied by one man only. A descriptive pamphlet showing floor plans, details, and form of application will be sent by the Bursar upon request.

Other Residence Halls for Men

Three residence halls for men—Hitchcock, Snell, and Goodspeed, are located on Ellis Avenue between Fifty-seventh and Fifty-ninth streets. Single and double rooms in these halls rent for from \$40 to \$62 a quarter per man. The rooms are completely furnished with the exception of towels. There are no dining-rooms in these halls but residents customarily take their meals at Hutchinson Commons, a short distance across the Quadrangles, where excellent meals are provided by cafeteria service. A pamphlet showing floor plans and details will be sent by the Bursar upon request.

HALLS FOR WOMEN

Other Residence Halls for Women

Four residence halls for women students—Beecher, Foster, Green, and Kelly—are located on University Avenue between Fifty-eighth and Fifty-ninth streets. Rooms accommodate one or two students and are completely furnished with the exception of towels. Quarterly rentals range from \$40 to \$70 a student. These halls have dining-rooms and residents are required to take their meals at the halls. The quarterly charge for board is \$82. A pamphlet with floor plans, details, and rental rates will be sent by the Bursar upon request.

Blake and Gates Halls, at Fifty-eighth Street and Ellis Avenue, are being utilized as temporary residence halls for women. Quarterly rentals range from \$46 to \$60. These halls have no dining-room, but residents may take meals at the Cloister Club of Ida Noyes Hall or at Hutchinson Commons.

Drexel House, a co-operative dormitory accommodating sixteen women students is located at 5845 Drexel Avenue, two blocks from the central quadrangle. The rooms are single and rent for \$40 each a quarter. The housekeeping including preparation of meals and cleaning is done co-operatively by the residents at comparatively low cost. Application should be sent to the Bursar.

UNIVERSITY FURNISHED APARTMENTS

The University has a limited number of apartments for rental to married students. These apartments are furnished with the exception of bedding, table linen, silver, and curtains. The number of rooms in each apartment ranges from three to six, and the rentals from \$45 to \$57.50 a month. The rental rate includes the charge for gas and electric current and for electric refrigeration.

Application for these apartments indicating the number in the family and the period for which the apartment is wanted should be made to the Bursar.

OTHER HOUSING ACCOMMODATIONS

In order to assist students who require accommodations in private homes, the Bursar's office maintains a listing and inspection service. Rooms on the approved list are inspected in accord with established standards. Students should make personal inspection before engaging such rooms.

Furnished houses or apartments, of from four to ten rooms, in the immediate vicinity of the University range in rental from \$60 to \$150 a month. One-, two-, and three-room apartments rent for from \$45 to \$100 a month.

Rooms may be obtained in the vicinity of Rush Medical College at from \$4 to \$7 a week. Board and room together may be obtained at from \$8 to \$12 a week. A Bureau of Information is maintained at the Y.M.C.A., to which students may apply for directions as to desirable board and lodging.

ESTIMATE OF EXPENSES

The following table will enable the students to form an estimate of the quarterly expenses, exclusive of tuition fees, which are common to all students in the University.

	Low	Average	Liberal
Rent and care of room.....	\$ 40	\$ 56	\$120
Board.....	75	84	115
Laundry and pressing.....	12	25	50
Textbooks and supplies.....	13	25	40
Incidentals.....	15	35	55
Total.....	\$155	\$225	\$380

FELLOWSHIPS AND OTHER AIDS

FELLOWSHIPS

Fellowships are awarded annually by the Committee on Fellowships and Scholarships, to students studying for higher degrees who desire to pursue advance work in some special field.

Applications for Fellowships.—Applications for Fellowships should be addressed to the Committee on Fellowships and Scholarships, Cobb Lecture Hall, Room 203, and should be in their hands before March 1.

Appointments to Fellowships:

a) *Date.*—The annual appointments to Fellowships are made April 1. Appointees are given until April 15 to accept or decline. A fellowship is available for any three of the four quarters, beginning with the Summer Quarter, following the date of appointment.

b) *Attainments required.*—The candidate must have attained proficiency in some department. In general, he should have spent at least one year in resident study after receiving his Bachelor's degree. In making the appointment special weight is given to dissertations indicating the candidate's ability to conduct original investigation.

Quarterly Reports.—Each fellow makes a written report to the Committee on Fellowships at the beginning of each quarter. This report outlines his work as a student, and the work assigned to him as an officer of the University for the current quarter, and is indorsed by the head of the department and the Dean of the Division. The report blanks may be procured at the office of the Committee as given above.

Appropriations are made annually from the general funds of the University for the maintenance of Fellowships for candidates for higher degrees. These Fellowships at present range in value from \$300.00, the tuition fees for three quarters, to an amount in excess of those fees. A limited number of Scholarships, covering a part of all of the tuition fees for three quarters, are also awarded annually.

Candidates for these Fellowships and Scholarships should send to the Committee on Fellowships and Scholarships, a record of their previous work and distinctions, degrees, and past courses of study, with copies of their written or printed work in the field of the department in which application is made. Application must be received by the Committee on Fellowships and Scholarships, Cobb Lecture Hall, Room 203, *not later than March 1 of each year*, in order to be considered for the following year. Appointments to fellowships are made April 1, scholarship appointments are made about August 1.

Fellows may be called upon as an assistant in reading and preparing examinations, or in the University libraries, laboratories, and museums; but in no case will they be expected to devote so much time to this work as to prevent the successful prosecution of their own work as students. Fellows will not engage in outside work for compensation, unless by permission of the Chairman of the Committee on Fellowships. Except in rare cases, students will not be appointed to Fellowships until they have done at least one year of work for a higher degree.

The Edith Barnard Memorial Fellowship in Chemistry, established in memory of Dr. Edith Barnard, is awarded upon the nomination of the Department of Chemistry.

The Dane Billings Memorial Fellowship, founded by Dr. Frank Billings for research in medicine, is awarded upon recommendation of the Dean of Rush Medical College.

The Daniel R. Brower Fellowship is awarded upon recommendation of the Dean of Rush Medical College.

The Seymour Coman Fellowships are to be used for scientific research with special reference to preventive medicine and the cause, prevention, and cure of diseases. The candidate must have the qualifications of the M.D. or Ph.D. degree and must devote his entire time to research. Appointments are made by the President upon nomination of the Seymour Coman Research Committee.

The Mr. and Mrs. Isaac Fish Fellowship, for research in Ophthalmology, is awarded to a graduate in medicine upon recommendation of the Chairman of the Department of Ophthalmology of Rush Medical College.

The Stanton Abeles Friedberg Fellowship in Laryngology and Otology, established in 1921 by Mrs. Stanton A. Friedberg in memory of her husband, is awarded upon recommendation of the Department of Otolaryngology and the Dean of Rush Medical College.

The Francis A. Hardy Fellowship in Surgery and Assistant House Surgeonship in the Presbyterian Hospital, established by Mr. Francis A. Hardy, is awarded by the Department of Surgery of Rush Medical College to a graduate in medicine.

The Hyde Memorial Fellowship is for research in skin diseases and cancer. The award is made upon recommendation of the Chairman of the Department of Dermatology of Rush Medical College.

The E. Fletcher Ingals, Jr., Fellowship in Laryngology and Otology is awarded to a physician who is seeking to qualify himself for the practice of laryngology and otology. Opportunity is afforded for advanced work and clinical training.

The Mr. and Mrs. Frank G. Logan Fellowships, endowed by Mr. Frank G. Logan, are available for research in medicine, surgery, hygiene and bacteriology, and pathology. Appointments are made by the President upon the nomination of the Frank G. Logan Fellowship Committee.

The income from *The Joseph B. Loewenthal Fellowship Fund*, endowed in 1920 by Mr. Berthold Loewenthal as a memorial to his son, is awarded for advanced study in the Department of Chemistry.

The Fellowship in Pathology is awarded upon the recommendation of the Department of Pathology of Rush Medical College.

The Anna Louise Raymond Fellowship in Medicine is awarded biennially in support of work directed by Dr. Wilber E. Post.

The Nicholas Senn Fellowship in Surgery is awarded to a graduate in medicine upon recommendation of the Chairman of the Department of Surgery of Rush Medical College.

The Douglas Smith Foundation provides funds to support various research projects in medicine. The number of fellowships awarded and the amount of each fellowship varies according to the problems under investigation and the qualifications of the holders of the fellowships. Application should be made to the Advisory Committee of the Douglas Smith Foundation.

The Gustavus F. Swift Fellowship in Chemistry, endowed by Mrs. Gustavus F. Swift as a memorial to her husband, is awarded upon the nomination of the Department of Chemistry for especial ability in research.

The Talcott Fellowships, endowed by Mr. William A. Talcott of Rockford, Illinois, are reserved for students studying for higher degrees, preferably for graduates of Rockford College.

The A. D. Thomson-Bevan Fellowship in Surgery and House Surgeonship in the

Presbyterian Hospital is awarded upon recommendation of the Chairman of the Department of Surgery of Rush Medical College to a graduate in medicine.

The Helen Kimmins Van Liere Research Fellowship in Physiology, established by Dr. Edward J. Van Liere in memory of his wife, is awarded for advanced work in the Department of Physiology.

The William H. Wilder, Jr., Fellowship in Neurology, established by Dr. and Mrs. William H. Wilder, is awarded to a student of neurology nominated by the Department of Anatomy upon recommendation of the professors in charge of neuro-anatomy and clinical neurology.

In addition to the foregoing fellowships offered by the University of Chicago, among many others there are the following fellowships and scholarships for which University of Chicago students are eligible to compete.

The Joseph A. Capps Prize. The Institute of Medicine of Chicago offers a Prize of \$500 for the most meritorious investigation in medicine or in the fundamental sciences, provided the work has a definite bearing on some medical problem. Competition is open to graduates of Chicago medical schools who have received the M.D. degree during the year 1931 or thereafter. Manuscripts must be submitted to the Secretary of the Institute of Medicine of Chicago, 122 South Michigan Boulevard, Chicago, not later than December 31, 1933. In the case of a paper submitted by more than one author, it is stipulated that all the authors must qualify, and that the prize paper be published under the same authorship as that under which it was submitted. The winner of the Prize will be expected to present the results of his investigation before the Institute at some meeting in 1934, the time to be designated later. If no paper presented is deemed worthy of the Prize, the award may be withheld at the discretion of the Board of Governors.

The John Simon Guggenheim Memorial Foundation Fellowships offer to scholars, both men and women, opportunities under the freest possible conditions to carry on advanced study and research in any field of knowledge, or opportunities for the development of unusual talent in any of the fine arts, including music. Application should be made to the Secretary of the Guggenheim Memorial Foundation, 551 Fifth Avenue, New York City.

The Medical Fellowship at Geneva. Announcement is made of a fellowship for graduate study at the medical faculty of the University of Geneva providing for tuition and a stipend of 3000 Swiss francs for the academic year, 1933-34. The stipend is approximately the equivalent of \$600 which is sufficient to cover living expense on a moderate scale. To be eligible, a candidate must be an American citizen, a graduate of an approved American medical school, or the holder of a master's or doctor's degree in a science related to the medical field, and must have a thorough knowledge of the French language. Either a man or a woman may apply and preference will be given to unmarried candidates under thirty-five years of age. The fellowship will be administered by the Swiss American Student Exchange under the auspices of the Institute of International Education. The closing date for filing applications with accompanying credentials is May 1. Application blanks may be obtained from the Institute of International Education, 2 West 45th Street, New York City.

The National Research Council Fellowships, provided by the Rockefeller Foundation to promote scientific research, are awarded by the National Research Council. Fellows may choose the institution in which they desire to pursue research. Applications should be made to the National Research Council, Washington, D.C.

The Rhodes Scholarships at Oxford University are administered by the Rhodes Trust.

The secretary of the committee for the state of Illinois is Mr. E. Lyman, Jr., Northwestern University, Evanston, Illinois. Mr. Robert V. Merrill is chairman of the University of Chicago committee.

RESEARCH FOUNDATIONS AND SPECIAL RESEARCH FUNDS

Louise B. and Emma M. Kuppenheimer Foundation was established for the study of structure, functions, and diseases of the eye. The annual income is available.

Lasker Foundation is awarded for research in causes, nature, prevention, and cure of degenerative diseases. The annual income is available.

A. D. Thomson Medical Fund is awarded for genito-urinary surgery. The annual income is available.

Gerard Van Schaick Fund is awarded for investigation of the pathology of the eye. The annual income is available.

A. SCHOLARSHIPS

I. HONOR SCHOLARSHIPS

Honor Scholarships.—Scholarships are assigned to students who have completed with distinction the work for the Bachelor's degree. Each department of the University has the privilege of recommending for the consideration of the Committee on Fellowships and Scholarships one student each year. Students appointed to these scholarships receive in each case a sum equal to the University tuition fees for three quarters from the time of their appointment, provided the student continues his studies in the departments making the nominations.

II. ENDOWED SCHOLARSHIPS

Application.—All applications for endowed scholarships are to be made to the Committee on Fellowships and Scholarships, Cobb Lecture Hall, Room 203, not later than June 1. Reports of awards will be made on or about August 1. Only students who have been in residence at least two quarters are eligible to apply for these scholarships.

The endowed and special scholarships, with conditions of award, follow:

The Marie J. Mergler Scholarship provides annual fees for a young woman student specializing in Physiology.

The James Nelson Raymond Scholarships, established by Mrs. Anna Louise Raymond, provide partial tuition fees for two worthy and needy students in the Medical School.

The Sydney Walker III Scholarship in Physiology, established by Dr. Sydney Walker, Jr., in memory of his son, provides partial tuition fees. The nomination is made by the Department of Physiology on the basis of ability and promise in research, and the holder is required to devote the major part of his time to research in Physiology.

The Clarence Milton Swale Memorial Scholarship, established by the will of Lillian G. Swale, provides tuition fees at Rush Medical College for a young man, preferably from the State of Iowa.

The Frederick A. Smith Scholarship Fund, established in 1920 by the will of Judge Frederick A. Smith, of Chicago, provides tuition for several students. Appointment is made on the basis of scholarship and need.

The La Verne Noyes Foundation, established July 5, 1918, by the gift of Mr. La Verne Noyes, provides, in the College, in the Divisions, and in Professional Schools, tuition scholarships in part for deserving students who (1) shall themselves have served in the Army or Navy of the United States in the war for liberty into which the Republic en-

tered on April 6, 1917, providing that such service was terminated by honorable discharge; or (2) shall be descendants by blood of anyone in service in the Army or Navy of the United States who served in said war; or (3) shall be descendants by blood of anyone who served in the Army or Navy of the United States in said war, provided that such service was terminated by an honorable death or an honorable discharge. Application should be made to the chairman of the Committee on Fellowships and Scholarships.

HOSPITAL INTERNES

Positions as internes, by appointment or through a competitive examination held by the respective hospitals staffs, are open each spring to graduates of Rush Medical College in the following Chicago hospitals: Presbyterian, Cook County, Michael Reese, St. Joseph's, St. Luke's, Augustana, Alexian Brothers', Passavant, Norwegian-American, Illinois Charitable Eye and Ear Infirmary, St. Anthony's, Swedish Covenant, Chicago Lying-in, and others, and in a much larger list of institutions outside of the city of Chicago which make appointments from the students of the Senior class in Rush Medical College. The occupants of these positions receive their board and lodging and acquire experience in practical Medicine and Surgery.

B. PRIZES

The Howard T. Ricketts Prize is awarded on the third day of May to a student of the University of Chicago presenting the best results in research in Pathology or Bacteriology.

The Harry Ginsburg Memorial Fund, established in memory of Harry Ginsburg, is awarded annually to a medical student in the Department of Physiology, the recipient to be designated by the Chairman of the Department upon the basis of industry, sincerity, and ability.

PRIZES IN RUSH MEDICAL COLLEGE

The Benjamin Rush Prize.—A medal and the sum of \$50 are given by the Faculty at each commencement to that member of the graduating class who passes the highest examination in every department of Medicine representing that year in the examination for the degree. Awarded in 1933 to John Lockwood Lindquist, S.B.

The Daniel Brainard Prize.—A medal is annually given by the Faculty to the student who makes and presents to the College Museum the best accepted dissection in Surgical Anatomy. Awarded in 1933 to John Marshall Weir, Jr.

The Freer Prizes.—These prizes are derived from the income of a fund presented to the College by the late Nathan M. Freer, of the Board of Trustees, as a memorial to the names of two honored members of his family long identified with the highest interests of this institution.

**The Joseph Warren Freer Medal and Prize* are awarded to a member of the Senior class for excellence in work in the Department of Medicine. Awarded in 1933 to Theodore Nathan Zekman, A.B., S.B.

**The L. C. Paine Freer Medal and Prize* are offered to that member of the Freshman or Sophomore class who presents the best dissertation involving investigation on the

** Rules governing the award of the Freer medals*.—(1) The candidate must present his dissertation in typewritten form. (2) Each candidate may present but one dissertation. (3) As the purpose of the medals is to stimulate research, only those dissertations will be considered that have been written in competition for the medal. This will exclude those published previous to their presentation to the committee and those that were written for a degree. (4) Applicable to the Joseph Warren Freer Medal only. Only those dissertations that are submitted by bona fide Juniors and Seniors will be considered. Students acting as assistants to instructors and receiving compensation therefor cannot compete for the prize.

part of the student. The dissertation must be placed in the hands of the Dean of Medical Students by April 1, 1934. Awarded in 1933 to Melvin Henry Knisely, A.B., and Edwin Herman Lennette, S.B.

The Henry M. Lyman Memorial Prize.—In memory of Henry M. Lyman, who for many years devoted much of his best energies and his unusual ability to the upbuilding of Rush Medical College, and who served successfully as Professor of Physiology and Neurology and Professor of Medicine and who was later Dean of the Faculty, a fund has been created by his children, the proceeds of which will be offered to a member of the Junior class for excellence in the work of the Junior year in the Department of Medicine. Awarded in 1933 to Fred Monroe Sandifer, A.B.

The Howard T. Ricketts Prize.—In memory of Dr. Howard Taylor Ricketts, at one time a member of the Department of Pathology, who died of typhus fever, while investigating that disease, in the City of Mexico, May 3, 1910, this Department has established a prize in Dermatology. This prize, of the value of \$25, will be awarded annually to the student presenting the best dissertation embodying the results of original investigation on some topic related to Dermatology.

C. UNIVERSITY SERVICE

I. DEPARTMENTAL SERVICE

Graduate.—A limited number of assignments to service, yielding a part or all of the tuition fees for three quarters, are available for graduate students of attainment and promise. This service is usually rendered in the department in which the student is doing the major part of his work. Students in departmental service pay their tuition fees in cash at the beginning of each quarter. At the close of the quarter they receive a cash payment for the amount of the service if it has been satisfactorily rendered.

Assignments of this class are awarded preferably to students who desire to work in a special department rather than to those who desire to pursue general courses. Application should be made through the Chairman of Departments to the Dean of Students.

II. LIBRARY SERVICE

Applicants for positions in Library service are appointed to service by the Director of Libraries, Harper M25. Students holding such appointments must maintain a grade of academic work satisfactory to their Deans and of service satisfactory to the Libraries. Such students are required to pay their fees in cash at the office of the Bursar within the first five days of the quarter. For whatever service they may satisfactorily render they will be paid in cash at the end of the quarter.

III. MISCELLANEOUS SERVICE

Other forms of student service are: (a) messenger service at the Information Office, applications for which should be addressed to the Bursar; (b) service in the University Choirs, applications for which should be addressed to the Director of the University Choirs; (c) service in the University Band, applications for which should be addressed to the Director of the University Band; (d) service in the Commons, the compensation being furnished in board, applications for which should be addressed to the Director of the Commons.

IV. THE BOARD OF VOCATIONAL GUIDANCE AND PLACEMENT

The University through the Board of Vocational Guidance and Placement maintains a bureau for the recommendation of students to teaching positions, to industrial and

business connections, and to part-time employment for students while in the University.

The office of the Board of Vocational Guidance and Placement is in Cobb Lecture Hall, Room 215.

D. LOAN FUNDS

From funds created by friends of the University loans are made to many students of worth and promise who need temporary aid. These funds are limited and are usually exhausted early in the academic year.

A special circular entitled *Awards and Aids* will be sent on request. It gives details concerning all the forms of aid, routine of application, etc.

The Clara M. Coit Loan Fund for Medical Students is established to aid needy students who give promise of unusual service in medicine. Interest is charged at the rate of 4 per cent. Application should be made to the Dean of Medical Students.

The Medical Students' Loan Fund, established by the Physicians Association of Cook County, is available for medical students, preferably colored, and is loaned with interest at 4 per cent. Application should be made to the Dean of Medical Students.

LIBRARIES, LABORATORIES, AND MUSEUMS

A. THE LIBRARIES

The Libraries of the University include the General Library and the Departmental Libraries, including the Library of Rush Medical College.

The General Library is a reference and circulating library and is open to students in all departments of the University. Students who have matriculated and paid their library fees may take out at one time nine volumes from the General Library and other libraries open to circulation, but not more than six from any one library. These may be kept two weeks, with privilege of extension of loan in special cases. The library is open week days from 8:00 A.M. to 10:00 P.M. (Saturday, 8:00 A.M. to 6:00 P.M.), holidays and vacations excepted. In the latter it is open from 9:00 A.M. to 1:00 P.M. daily.

The Library of the Biological Departments is located in Culver Hall, conveniently accessible to all students working in these departments. It includes the General Medical Library.

The Libraries contain at the present time about 1,000,000 volumes, bound and catalogued. They receive 5,000 current periodical publications, including in part the transactions and proceedings of learned societies. Technical periodicals are, as a rule, found in the Departmental Libraries.

The Library of Rush Medical College contains 34,785 volumes, 5,033 pamphlets, and files of all the leading medical journals in English, German, and French. During the last college year the library had a daily average attendance of 204 students.

The Rental Library is located in the University Bookstore, 5802 Ellis Avenue. It contains over 50,000 volumes. These books, supplementing the general library system, are rented to members of the University at a nominal cost.

B. THE LABORATORIES

LABORATORIES AT THE QUADRANGLES

The Kent and the George Herbert Jones Chemical Laboratories, the Ryerson Physical Laboratory, and Eckhart Hall for Mathematical Science contain rooms for special

research, small laboratories for work of investigation, large laboratories for general instruction, lecture-rooms, classrooms, library, museum, and offices.

The Hull Biological Laboratories are a group of buildings devoted to the study of the anatomical, botanical, and zoological sciences. Laboratories for work in preventive medicine are located in these buildings. The Whitman Laboratory of Experimental Zoölogy, the gift of Professor and Mrs. Frank R. Lillie, affords opportunity for research work in this department.

Laboratories for Physiology, Physiological Chemistry, and Pharmacology adjoin the Albert Merritt Billings Hospital on the Quadrangles and comprise seven floors including the ground floor. Mechanics' shops, storerooms, and freezing-room are located on the ground floor. All floors are provided with mechanical refrigerators, automatic elevators, and dumb waiters.

The section devoted to Physiology includes large laboratories for undergraduate and graduate courses, for work in general physiology and in physiological optics, many research rooms and special laboratories for basal metabolism, electrocardiographic, and X-ray studies.

The section devoted to Physiological Chemistry provides on the lower floors large laboratories for the work of the fundamental courses, lecture rooms, rooms for balances, ovens, polariscopes, solutions, Kjeldahl apparatus, hydrogen sulphide work, conferences, etc., large laboratories for advanced work together with many smaller rooms for research and work on special problems. One floor is devoted especially to work involving the application of physical chemistry to biological problems. The fifth floor is devoted to Pharmacology providing laboratories for chemical and mammalian work, operating rooms, research rooms, and conference rooms. Animal rooms, operating rooms, sterilizing rooms, etc., are on the sixth floor.

The Pathology building is incorporated with the buildings of the Billings Hospital and the University Clinics, and contains extensive laboratories.

The Frank Billings Medical Clinic incorporates within a single architectural unit the laboratories of the Department of Medicine and those portions of the Albert Merritt Billings Hospital and the Max Epstein Clinic in which the Department of Medicine cares for patients. The laboratories which are unusually extensive and complete afford facilities for teaching and for employment of the methods used in the investigation of diseases, including those common to medicine and biology, physiology and chemistry.

The facilities of the Surgical Department which are all located in one building comprise 100 beds in the Albert Merritt Billings Hospital, an out-patient department with separate divisions for general surgery and the surgical specialties and classrooms and laboratories in the Medical School. Laboratory space in a student's room is assigned to each student registered in the Department of Surgery where both routine and investigative work may be performed.

Extensive laboratory facilities for medical students and research workers in the Department of Pediatrics are provided in the Bobs Roberts Memorial Hospital for Children, which was opened on May 1, 1930. In this hospital, which adjoins the Albert Merritt Billings Hospital to the southwest, laboratories and classrooms are in close physical connection with the hospital facilities and with the large Out-Patient Department. The entire fifth floor of the building and most of the ground floor are devoted to laboratories. Adequate equipment is provided for biochemical, physiological, biophysical, serological, and pathological research.

LABORATORIES IN CHICAGO LYING-IN HOSPITAL

The Department of Obstetrics and Gynecology has its laboratories in a separate section erected by the University in the Chicago Lying-in Hospital group, immediately adjacent to the Mothers' Aid Pavilion in which all infected cases are treated. Special laboratories are included for pathology, fetal pathology, biochemistry, physiological chemistry, bacteriology, and serology. In addition, a demonstration laboratory and birth room, and a library have been provided.

LABORATORIES AT RUSH MEDICAL COLLEGE

THE RAWSON CLINICAL LABORATORY was originally made possible through the generous gift of \$300,000 by Frederick H. Rawson, president of the Union Trust Company. It has been erected at the northeastern corner of South Wood and Harrison Streets on the ground formerly occupied by the old Rush Clinical Building. It covers an area approximately 90 by 100 feet and is five stories in height. Connections have been made with Senn Hall on all floors, and with the Presbyterian Hospital. The building houses the administration offices of the College and the large medical library and special Faculty rooms on the first floor. The Departments of Occupational Therapy, Hydrotherapy, locker-rooms and restrooms, and the library stack-room are in the basement.

It is planned that the Department of Occupational Therapy will establish contact with the industries of Chicago and vicinity for the purpose of training and placing in positions of employment persons suffering from various physical handicaps.

The second, third, and fourth floors are devoted to various departments of the Central Free Dispensary, classrooms, and laboratories.

On the fifth floor is the Department of Pathology, housed in the Norman Bridge Laboratories of Pathology. Dr. and Mrs. Norman Bridge, of Los Angeles, contributed \$100,000 in order to enable the University to build the fifth story of this building.

The building is so constructed that two stories may eventually be added to it to meet the increasing needs of the Rush Postgraduate School.

SENN HALL, erected through the munificence of the late Professor Senn and other members of the Faculty, adjoins the Clinical Building on the east. It covers a ground space of 40 by 90 feet, is eight stories in height (including the basement), and of absolutely fireproof construction. The basement and first three floors, affording over 10,000 square feet of floor space, are devoted to the dispensary and the clinical teaching connected therewith. In 1932-33 patients made 191,408 visits to the dispensary, including visits from 30,445 new patients. The fourth and fifth floors are occupied by clinical laboratories and conference rooms. The remaining two stories contain two surgical and medical amphitheaters, seating about 140 each, with necessary waiting and preparation rooms.

THE LABORATORY BUILDING, on the south side of Harrison Street, is 100 by 45 feet in area and six stories in height (including basement). This building provides facilities for research and for instruction in Operative Surgery, Surgical Anatomy, Pharmacology, and Therapeutics.

HOSPITALS

Clinical facilities for medical students and research workers are afforded at the University Quadrangles by the University Clinics which now comprise the Albert Merritt Billings Hospital and the Max Epstein Clinic, the Bobs Roberts Memorial Hospital for

Children, the Gertrude Dunn Hicks Memorial, the Nancy Adele McElwee Memorial (by affiliation with the Home for Destitute Crippled Children), and the Chicago Lying-in Hospital and Dispensary (also by affiliation). The Clinics are designed primarily for the purpose of providing all the facilities desirable for the instruction of students in clinical medicine and for the carrying on of investigation and research.

The Albert Merritt Billings Hospital has a capacity of 216 beds intended for the use of the departments of Medicine and Surgery. The Max Epstein Clinic, located under the same roof, provides for the care of several hundred ambulatory cases daily. The laboratories of the departments of Medicine and Surgery are in close physical connection with the hospital.

The Bobs Roberts Memorial Hospital for Children, adjacent to the Albert Merritt Billings Hospital, has a capacity of 80 beds and provision for a large out-patient department. The Department of Pediatrics has its laboratories on the ground floor and the fifth floor of the building, and centers its activities in it.

The Nancy Adele McElwee Memorial and Gertrude Dunn Hicks Memorial adjoin the Albert Merritt Billings Hospital on the southeast. Together they provide 100 beds for the care of crippled children. The Division of Orthopedic Surgery of the Department of Surgery is in charge of the professional services, and is provided with laboratories for research.

The Chicago Lying-in Hospital and Dispensary in affiliation with the University of Chicago opened its new building in the block just west of the Bobs Roberts Memorial Hospital for Children, in May, 1931. The Department of Obstetrics and Gynecology of the University has free access to the clinical material and facilities of the hospital. Student laboratories, classrooms, and research laboratories have been incorporated into the building for the use of the Department. The Max Epstein Clinic for out-patients materially increases the clinical facilities.

The bed capacity of the University of Chicago Clinics is, therefore, well over 500, and provision is made for more than 500 out-patients daily. In addition to this, the Clinics, through affiliation with the Country Home for Convalescent Children, the Children's Memorial Hospital, and the Home for Destitute Crippled Children, have abundant clinical material to supplement that available on the Quadrangles.

The Presbyterian Hospital, with 430 beds and over 11,000 admissions a year, adjoins Rush Medical College and is connected with it. Close co-operation is maintained between hospital and college, and opportunity is afforded students of studying patients in the wards.

ATTENDING STAFF OF THE PRESBYTERIAN HOSPITAL

MEDICINE

Consulting Physicians: DRs. JAMES B. HERRICK, JOHN A. ROBISON.

Attending Physicians: DRs. ERNEST E. IRONS, WILBER E. POST, ROLLIN T. WOODYATT, RALPH C. BROWN.

Associate Attending Physicians: DRs. SAMUEL R. SLAYMAKER, DONALD P. ABBOTT, WILLIAM A. THOMAS, LEE C. GATEWOOD, JAMES B. EYERLY, FRANK B. KELLY, WILARD O. THOMPSON.

Assistant Attending Physicians: DRs. HOWARD M. SHEAFF, HOMER K. NICOLL, WILLIAM G. HIBBS, EDWARD J. STIEGLITZ, CHARLES M. BACON, ALVA A. KNIGHT, CLAYTON J. LUNDY, LEO K. CAMPBELL, JOHN S. ASHBY, RALPH W. TRIMMER, ARTHUR R. COLWELL, JAMES L. WILLIAMS, PAUL S. RHODS, ROBERT E. JOHANNESSEN, EVANS

W. PERNOKIS, STUYVESANT BUTLER, LAWRENCE L. McLELLAN, EARLE GRAY, EUGENE F. TRAUT, WILLARD L. WOOD.

Resident Physician: DR. ELWOOD MASON.

DISEASES OF CHILDREN

Attending Pediatrician: DR. CLIFFORD G. GRULEE.

Associate Attending Pediatricians: DRS. ARTHUR H. PARMELEE, CHARLES K. STULIK.

Assistant Attending Pediatricians: DRS. HEYWORTH N. SANFORD, ELEANOR I. LESLIE, WILLIAM L. BUHRMAN, JOHN J. ZAVERTNIK.

Resident Pediatricians: DRS. PAUL H. HERRON, GEORGE McNAUGHTON.

PSYCHIATRY AND NEUROLOGY

Attending Neurologists: DRS. THOR ROTHSTEIN, PETER BASSOE.

Associate Attending Neurologist: DR. JAMES C. GILL.

Assistant Attending Neurologists: DRS. LOREN W. AVERY, RICHARD B. RICHTER.

SURGERY

Attending Surgeons: DRS. ARTHUR D. BEVAN, CARL B. DAVIS, VERNON C. DAVID, KELLOGG SPEED, CHARLES A. PARKER (Orthopedic Surgery), FREDERICK B. MOOREHEAD (Oral Surgery), HERMAN L. KRETSCHMER and ROBERT H. HERBST (Urology).

Associate Attending Surgeons: DRS. GATEWOOD GATEWOOD, EDWIN M. MILLER, ALBERT H. MONTGOMERY.

Assistant Attending Surgeons: DRS. ADRIAN VERBRUGGHEN (Neuro-Surgery). FRANCIS H. STRAUS, HARRY A. OBERHELMAN, GOLDER L. McWHORTER, HILLIER L. BAKER, GEORGE H. JACKSON, JR., ELVEN J. BERKHEISER, DEAN L. RIDER (Orthopedic Surgery), WILLIS J. POTTS, RANDOLPH F. OLMSTEAD, EARL MCCARTHY, MARK L. LORING, STANLEY E. LAWTON, ARTHUR E. DIGGS, KAY L. THOMPSON (Oral Surgery), KNOWLTON E. BARBER, HUGH J. POLKEY, CHESTER A. PERRODIN, NORRIS J. HECKEL, EUGENE A. OCKULY (Urology).

Anaesthetist: DR. ISABELLA HERB.

Assistant Anaesthetists: DRS. MARY LYONS, ALICE McNEAL, NORA B. BRANDENBURG.

Roentgenologists: DRS. CASSIE BELL ROSE, F. B. SQUIRE.

Resident Surgeons: DRS. RICHARD K. GILCHRIST, A. LOUIS ROSI.

OBSTETRICS AND GYNECOLOGY

Attending Obstetricians and Gynecologists: DRS. NOBLE S. HEANEY, CAREY CULBERTSON.

Associate Obstetricians and Gynecologists: DRS. AARON E. KANTER, EDWARD D. ALLEN, CARL P. BAUER.

Assistant Attending Obstetricians and Gynecologists: DRS. HOWARD J. HOLLOWAY, FRED O. PRIEST.

LARYNGOLOGY AND OTOTOLOGY

Attending Laryngologist and Otologist: DR. GEORGE E. SHAMBAUGH.

Associate Attending Laryngologist and Otologist: DR. DANIEL B. HAYDEN.

Assistant Attending Laryngologists and Otologists: DRs. GEORGE A. TORRISON, THOMAS W. LEWIS, ELMER W. HAGENS, LOUIS T. CURRY.

Resident Laryngologist and Otologist: DR. GEORGE E. SHAMBAUGH, JR.

OPHTHALMOLOGY

Consulting Ophthalmologist: DR. WILLIAM H. WILDER.

Associate Attending Ophthalmologists: DRs. WILLIAM F. MONCREIFF, EARLE B. FOWLER, CHARLES G. DARLING, THOMAS D. ALLEN.

Assistant Attending Ophthalmologists: DRs. VERNON M. LEECH, BERTHA KLIEN, ELIAS SELINGER.

Resident Ophthalmologist: DR. SAMUEL BROWN.

DERMATOLOGY

Attending Dermatologist: DR. OLIVER S. ORMSBY.

Assistant Attending Dermatologists: DRs. EDWARD A. OLIVER, JAMES H. MITCHELL, CLARK W. FINNERUD, MICHAEL H. EBERT, J. FRANK WAUGH.

PATHOLOGY

Attending Pathologist: DR. EDWIN R. LECOUNT.

Resident Pathologist: DR. CARL W. APFELBACH.

PHYSIOTHERAPY

Assistant Attending Physiotherapist: DR. DISRAELI W. KOBAK.

Attending Toxicologist: DR. WILLIAM D. McNALLY.

CHEMISTS

Resident Chemist: MILNOR R. FREELAND.

Resident Bacteriologist: G. BERNICE RHODES.

THE COOK COUNTY HOSPITAL, which is situated opposite the College, admits over 40,000 patients annually. In this institution are given about forty clinics a week, including all varieties of medical and surgical cases. The facilities for the study of Pathology which are offered at the Cook County Hospital are exceptionally good. Between 700 and 800 necropsies are made annually by Professor Wells and the other pathologists of the hospital. The General Hospital contains 3,200 beds. Records show that 40,000 patients were admitted and treated, 40,000 dispensary cases treated, and 40,000 examined and rejected or given advice (not hospital cases), making a total of 120,000 in one year.

Clinical courses in the Cook County Hospital are offered to the students of Rush Medical College by the following members of the Faculty:

Attending Physicians: DRs. FREDERICK TICE, ARCHIBALD HOYNE, LEE CONNEL GATEWOOD, HARRY H. FREILICH, LEROY H. SLOAN, EUGENE F. TRAUT, AARON ARKIN.

Associate Physicians: DRs. ALVA A. KNIGHT, EVANS W. PERNOKIS, LEO K. CAMPBELL, RALPH L. HARRIS, ROBERT E. JOHANNESSEN, MARGARET H. AUSTIN.

Attending Psychiatrists: DRs. SIDNEY KUH, JAMES C. GILL.

Associate Psychiatrists: DRs. MORRIS BRAUDE, DAVID B. ROTMAN.

Attending Neurologists: DRs. JOHN FAVILL, LOREN W. AVERY.

Associate Neurologists: DRs. ROLAND P. MACKAY, RICHARD B. RICHTER.

Attending Pediatricists: DRs. CHARLES K. STULIK, CRAIG D. BUTLER.

Associate Pediatricists: DRs. WILLIAM L. BUHRMAN, ARTHUR H. PARMELEE.

Attending Surgeons: DRs. ELVEN J. BERKHEISER (Orthopedic), VERNON C. DAVID, GEORGE G. DAVIS, ROGER T. VAUGHAN, ALBERT H. MONTGOMERY, EDWIN M. MILLER, GATEWOOD GATEWOOD.

Associate Surgeons: DRs. FRANCIS H. STRAUS, HARRY A. OBERHELMAN, ADRIAN VERBRUGGHE, WILLIS J. POTTS, EARL R. MCCARTHY.

Attending Gynecologists: DRs. CAREY CULBERTSON, AARON E. KANTER.

Associate Gynecologists: DRs. RICHARD I. TORPIN, ARTHUR H. KLAUANS.

Attending Otolaryngologist: DR. LOUIS T. CURRY.

Associate Otolaryngologist: DR. LINDEN J. WALLNER.

Attending Ophthalmologists: DRs. THOMAS D. ALLEN, EARLE B. FOWLER, WILLIAM F. MONCREIFF.

Associate Ophthalmologists: DRs. MAX JACOBSON, HALLARD BEARD, GAIL R. SOPER.

Attending Dermatologist: DR. MICHAEL H. EBERT.

Associate Dermatologist: DR. MAXWELL J. WOLFF.

Attending Pathologist: DR. H. G. WELLS.

THE COUNTRY HOME FOR CONVALESCENT CHILDREN, at Prince Crossing, Illinois, a few miles west of Chicago, is in affiliation with the University of Chicago. It has for its purpose the care, cure, and education of helpless and crippled children.

STAFF OF THE COUNTRY HOME FOR CONVALESCENT CHILDREN

Consulting Staff:

Consulting Physicians: DR. JOSEPH BRENNEMANN, DR. E. H. OELKE.

Consulting Surgeons: DR. DALLAS B. PHEMISTER, DR. CHARLES A. PARKER.

Consulting Otolaryngologist: DR. GEORGE E. SHAMBAUGH.

Consulting Ophthalmologist: DR. E. V. L. BROWN.

Consulting Oral Surgeon: DR. FREDERICK B. MOOREHEAD.

Attending Staff:

Attending Physicians: DRs. FREDERIC W. SCHLUTZ, BENGT HAMILTON, W. W. SWANSON.

Attending Surgeons: DRs. EDWARD L. COMPERE, CHARLES B. HUGGINS, C. HOWARD HATCHER, PAUL BUCY.

Attending Roentgenologists: DRs. PAUL C. HODGES, ALFRED C. LEDOUX.

Attending Orthopedic Surgeon: DR. E. J. BERKHEISER.

Attending Ophthalmologist: DR. DEWEY KATZ.

Attending Otolaryngologist: DR. J. R. LINDSAY.

Attending Dental Surgeon: DR. ALBERT DAHLBERG.

THE CHILDREN'S MEMORIAL HOSPITAL, 707 Fullerton Avenue, affiliated with the University of Chicago, has 264 beds.

ATTENDING STAFF

In Medicine: DR. JOSEPH BRENNEMANN, Chief of Staff. DRS. GEORGE E. BAXTER, ARCHIBALD HOYNE, WILLIAM B. MCCLURE, C. A. ALDRICH, N. A. BACHMANN, LOUIS D. MINSK, FRANKLIN J. CORPER, GUSTAV KAUFMANN, SIGURD H. KRAFT, C. SCHOTT, JOHN L. REICHERT, BERT I. BEVERLY, BEATRICE W. HAWKINS, JULIUS RHODES, A. H. ROBER, J. H. WALLACE, A. J. WEIGEN, S. C. HENN, KATHERINE MAYER, HAROLD A. ROSENBAUM, ALVAH N. NEWCOMB, M. ZEISLER, R. BLESSING, LOUISE C. KAPPES, E. T. MCENERY, W. C. MCKEE, G. F. MUNNS, S. C. PEACOCK, MILA G. PIERCE, A. M. PURIS, B. L. SARGENT, CLARA M. DAVIS, S. GIBSON, J. A. BIGLER, I. M. EPSTEIN, A. E. GILLIS, HELEN C. HAYDEN, EVA J. LINE, J. MCDAVID, H. F. MEYER, MARY H. POPE, G. F. WEINFELD, MORLEY D. MCNEAL, PHOEBE CLOVER, ELIZABETH A. BERGNER, HARRY HADLEY BOYLE, HARRY LESLIE FAULKNER, F. P. SULLIVAN, N. T. WELFORD.

In Neurology: DR. RALPH HAMILL.

In Dermatology: DR. M. S. FINK.

In Surgery: DRS. ALBERT H. MONTGOMERY, JOHN A. GRAHAM, FREDERICK B. MOOREHEAD, JAY IRELAND, K. E. BARBER, J. J. MUSSILL, M. L. LORING, W. J. POTTS, R. F. OLMSTED, L. W. SCHULTZ, PERCIVAL BAILEY, P. C. BUCY, H. L. KRETSCHMER, STANLEY E. LAWTON, ARTHUR E. DIGGS.

In Orthopedics: DRS. FREMONT A. CHANDLER, C. N. PEASE.

In Ophthalmology: DRS. RICHARD C. GAMBLE, ELMER A. VORISEK, N. K. LAZAR, GEORGE P. GUIBOR.

In Otolaryngology: DRS. G. S. LIVINGSTON, A. L. VAN DELLEN, NORMAN LESCHIN, MAURICE H. COTTLE, G. J. GREENWOOD, J. W. HAYDEN, M. T. LAMPERT, J. C. VERMEREW, N. D. FABRICANT.

In Roentgenology: DR. W. E. ANSPACH.

In Pathology: DR. WILLIAM G. HIBBS.

In Dentistry: DR. C. F. STINE, Attending Dentist. R. G. HAUPEL, Assistant.

Director of Speech Clinic: FRANCES PERLOWSKI.

RESIDENT STAFF

Out-Patient Department Resident: DR. EDITH M. BONNET.

Senior Medical Resident: DR. MANDEL L. SPIVEK.

Medical Resident: DR. JOHN P. BURGESS.

Resident in Pathology: DR. HAROLD E. ROE.

Surgical Resident: MANLEY A. PAGE.

ST. JOSEPH'S HOSPITAL, 2100 Burling Street, became affiliated with Rush Medical College in 1915. The hospital is conducted by the Sisters of Charity, St. Vincent de Paul, and has 210 beds.

Extra-mural courses.—Through the courtesy of the medical attendants and managing officers of several hospitals and dispensaries within convenient distance of the College extra-mural clinical courses are offered to the students of Rush, in small groups, and the clinical material available for teaching has thus been greatly augmented. Such courses are offered at the West Side Hebrew Dispensary, treating over 30,000 cases annually; at St. Luke's Hospital, with about 2,000 cases annually; at the Illinois

Charitable Eye and Ear Infirmary, treating about 1,000 cases; at the Chicago Isolation Hospital; and at St. Anthony's Hospital, with about 100 beds.

THE HOME FOR DESTITUTE CRIPPLED CHILDREN opened its new hospital, the Nancy Adele McElwee Memorial, on the University quadrangles on March 2, 1931. With the Gertrude Dunn Hicks Memorial this is administered by the Home in affiliation with the University as the orthopedic hospital of the University Clinics and provides for the care of 100 crippled children. The building at 1653 Maypole Avenue is used as an out-patient clinic. The staff is appointed by the Home from the staff of the University Clinics.

THE NEW PROVIDENT HOSPITAL was opened on May 15, 1933, in the premises bought from the Chicago Lying-in Hospital and formerly occupied by that hospital. Alterations to meet the requirements of a general service hospital of 110 beds have been made, the "Max Epstein Clinic of Provident," with a capacity of 300 visits a day, has been created for out-patients, adequate laboratory facilities incorporated, and the entire institution fully modernized and equipped. Clinical facilities for the care of the community and for the clinical practice and training of negro physicians and students are provided at a high level of professional and scientific adequacy. The Provident Hospital is actively associated with the University of Chicago.

ALUMNI ASSOCIATION

The Alumni Association of Rush Medical College, which is part of the University of Chicago Alumni Association, holds yearly meetings. These meetings occur on the date of the Summer Convocation in June. All graduates of the College in good standing are eligible to membership, which can be obtained by the payment of two dollars, the annual dues. The officers for the year ending July 1, 1933, were as follows:

OFFICERS

PRESIDENT.....	CHARLES A. PARKER, '91, Chicago
FIRST VICE-PRESIDENT.....	GEORGE H. COLEMAN, '13, Chicago
SECOND VICE-PRESIDENT.....	RUDOLPH HOLMES, '93, Chicago
THIRD VICE-PRESIDENT.....	LEON BLOCH, '03, Chicago
NECROLOGIST.....	FRANK W. ALLIN, '05, Chicago
SECRETARY-TREASURER.....	CARL O. RINDER, '13, Chicago
DIRECTORS FOR THREE YEARS.....	{ FREDERICK B. MOOREHEAD, '06, Chicago SAMUEL R. SLAYMAKER, '92, Chicago.
DIRECTORS FOR TWO YEARS.....	{ GEORGE M. CURTIS, '21, Chicago CHARLES M. BACON '14, Chicago
DIRECTORS FOR ONE YEAR.....	{ NATHAN P. COLWELL, '00, Chicago JOSIAH J. MOORE, '12, Chicago
DELEGATES TO ALUMNI COUNCIL.....	{ W. A. THOMAS, '16, Chicago C. W. FINNERUD, '16, Chicago E. J. STIEGLITZ, '22, Chicago

DEGREES GRANTED 1932-33

MASTER OF SCIENCE IN THE MEDICAL SCIENCES

June, 1932

Alma Fogelberg	Physiology
Wade Hampton Marshall	Physiology
Arthur Harold Rosenblum	Physiology
Beryl Imogene Troxell	Hygiene and Bacteriology

August, 1932

Norman Roy Cooperman	Physiology
James Richard Edward Hayden	Hygiene and Bacteriology
Ernestine Martha Joulilian Long	Hygiene and Bacteriology
Francis Joseph Mullin	Physiology
Grace Esther Wertenberger	Physiology
Ching Wu	Medicine
Isidore Jacques Yetwin	Hygiene and Bacteriology

December, 1932

Benjamin Brolaw Roseboom	Physiology
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March, 1933

None

RUSH MEDICAL COLLEGE

A. DEGREES OF DOCTOR OF MEDICINE

The students listed below, having completed five years of medical work, the fifth year consisting of acceptable services as internes in a hospital approved by the Faculty of the College, received the degree of Doctor of Medicine:

At the Close of the Spring Quarter, June 14, 1932

Samuel Alpern A.B., University of Pittsburgh, 1927	St. Margaret Memorial Hospital, Pittsburgh, Pennsylvania
Robert Ely Baer A.B., West Virginia University, 1927 S.B., <i>ibid.</i> , 1929	Swedish Covenant Hospital, Chicago
Marshall Quentin Baker S.B., University of Chicago, 1927	Mount Sinai Hospital, Chicago
John Charles Bennett A.B., Iowa State Teachers College, 1922 S.M., State University of Iowa, 1924	Presbyterian Hospital, Chicago
Reuben Alexander Benson A.B., St. Olaf College, 1926	U.S. Naval Hospital, Bremerton, Washington
Leland James Bland A.B., University of Missouri, 1928	Cook County Hospital, Chicago
Elena Boder S.B., University of Chicago, 1927	University of Chicago Clinics, Chicago
Floyd Melbourne Bond A.B., Oberlin College, 1927	Letterman General Hospital, San Francisco, Cal- ifornia
Beulah Chamberlain Bosselman A.B., Yankton College, 1920	Decatur & Macon County Hospital, Decatur, Illinois
Bertha Breeze Brainard A.B., University of North Dakota, 1916 S.B., <i>ibid.</i> , 1929	Children's Hospital, San Francisco, California
Alfred Louis Burgdorf S.B., University of Chicago, 1927	Harborview Hospital, Seattle, Washington
Malcolm Owen Burns S.B., University of Washington, 1925	San Francisco Hospital, San Francisco, Califor- nia
Ying Tak Chan A.B., Oberlin College, 1927	Woman's Medical College Hospital, Philadel- phia, Pennsylvania
Jack Posner Cowen S.B., University of Chicago, 1927	Cook County Hospital, Chicago
Zenon George Czaja A.B., University of Michigan, 1927	St. Mary of Nazareth Hospital, Chicago
Tanas George David A.B., Wheaton College, 1927	St. Mary's Hospital, Detroit, Michigan
George Marion DeYoung A.B., Hope College, 1926 A.M., Princeton University, 1927	Illinois Central Hospital, Chicago
Lealdes McKendree Eaton S.B., University of Chicago, 1927	Cook County Hospital, Chicago
J. Nick Esau A.B., Tabor College, 1925 A.M., University of Kansas, 1928 Ph.D., <i>ibid.</i> , 1929	Roseland Community Hospital, Chicago
Morris Donald Finkel S.B., University of Chicago, 1927	Mount Sinai Hospital, Chicago

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| Joseph Paul FitzGibbon
A.B., Creighton University, 1926 | Los Angeles General Hospital, Los Angeles, California |
| Marvin George Flannery
A.B., University of South Dakota, 1927
S.B., <i>ibid.</i> , 1928 | St. Luke's Hospital, Chicago |
| Homer Smith Fornoff
S.B., Utah State Agricultural College, 1923 | Highland Hospital, Oakland, California |
| Julius Emanuel Ginsberg
S.B., University of Chicago, 1927 | A. M. Billings Hospital, Chicago |
| Frank C. Green
A.B., Milton College, 1925
A.M., University of Wisconsin, 1928 | St. Luke's Hospital, Chicago |
| Charles Greenberg
S.B., New York University, 1927 | City Hospital, Welfare Island, New York City, New York |
| Clifford Milton Hughes
S.B., Dakota Wesleyan University, 1927 | U.S. Naval Hospital, Mare Island, California |
| George Green Ivers
A.B., Concordia College, 1926
S.B., University of North Dakota, 1929 | St. John's Hospital, Fargo, North Dakota |
| Moses Abraham Jacobson
S.B., Virginia Polytechnic Institute, 1916
S.M., Purdue University, 1918
Ph.D., University of Chicago, 1927 | Mount Sinai Hospital, Chicago |
| William Elbert Jones
S.B., Little Rock College, 1928 | St. Luke's Hospital, Spokane, Washington |
| William Stanley Kitt
S.B., University of Arizona, 1927 | Southern Pacific General Hospital, San Francisco, California |
| Charles Francis Leich
A.B., Wabash College, 1927 | Cook County Hospital, Chicago |
| James Poe Lovett
A.B., Baylor University, 1927 | Charity Hospital, New Orleans, Louisiana |
| Carroll Marion Lund
A.B., University of North Dakota, 1927
S.B., <i>ibid.</i> , 1929 | Ancker Hospital, St. Paul, Minnesota |
| Julia Margaret Lundstrom
A.B., University of Illinois, 1926 | Hurley Hospital, Flint, Michigan |
| Herbert Leon Michel
S.B., University of Chicago, 1928 | A. M. Billings Hospital, Chicago |
| Paul Gregory Modie
A.B., Marietta College, 1925
S.B., West Virginia University, 1929 | Grant Hospital, Columbus, Ohio |
| Cecil Alfred Morrow
Ph.D., University of Wisconsin, 1925 | St. Mary's Hospital, Madison, Wisconsin |
| Fred Howenstine Mowrey
A.B., University of Southern California, 1927 | Los Angeles General Hospital, Los Angeles, California |
| John Daniel McCarthy
S.B., University of Chicago, 1927 | Washington Boulevard Hospital, Chicago |
| George Morris McClure
A.B., Centre College, 1927 | Cook County Hospital, Chicago |
| Ralph Meredith McComas
A.B., Marshall College, 1927
S.B., West Virginia University, 1929 | U.S. Naval Hospital, Chelsea, Massachusetts |

William August Niebuhr S.B., University of Wisconsin, 1929	Methodist Hospital, Madison, Wisconsin
Rudolf Osgood S.B., Harvard University, 1924	Peter Bent Brigham Hospital, Boston, Massachusetts
Robert M. Oslund A.B., University of Montana, 1920 Ph.D., University of Chicago, 1923	Los Angeles General Hospital, Los Angeles, California
Erich Otten S.B., Lewis Institute, 1928 S.B., University of North Dakota, 1929	St. Margaret's Hospital, Hammond, Indiana
Homer Sidney Parker S.B., Rollins College, 1926 S.B., West Virginia University, 1928	Ohio Valley General Hospital, Wheeling, West Virginia
Thomas Joseph Pascal S.B., Yale University, 1927	Bridgeport Hospital, Bridgeport, Connecticut
Tom Dickey Paul S.B., University of Chicago, 1927	Cincinnati General Hospital, Cincinnati, Ohio
John William Peelen A.B., Hope College, 1927	Presbyterian Hospital, Chicago
Matthew Peelen A.B., Hope College, 1927	Harper Hospital, Detroit, Michigan
Harry Caldwell Pennington S.B., University of Chicago, 1927	Roseland Community Hospital, Chicago
Paul Kermit Perkins A.B., University of North Carolina, 1927	U.S. Naval Hospital, Washington, D.C.
Alfred Jacob Platt S.B., University of Chicago, 1927	Michael Reese Hospital, Chicago
Percy Perry Poliak A.B., University of Colorado, 1927	San Francisco Hospital, San Francisco, California
Nathaniel Edwin Reich S.B. New York University, 1927	City Hospital, Welfare Island, New York City, New York
Joseph Rock A.B., University of Rochester, 1926	Rochester General Hospital, Rochester, New York
Francisco Tuazon Roque S.B., University of Chicago, 1927	City Hospital, Welfare Island, New York City, New York
Sidney Rosenberg S.B., University of Chicago, 1927	Cook County Hospital, Chicago
Theodore Rosenberg S.B. New York University, 1927	Michael Reese Hospital, Chicago
Joseph Shaffer S.B., University of Chicago, 1927	Henry Ford Hospital, Detroit, Michigan
Irving Shulak A.B., University of Michigan, 1926	Harper Hospital, Detroit, Michigan
Carl Richard Smith A.B., University of Wisconsin, 1923	Barlow Sanatorium, Los Angeles, California
Ralph William Snodgrass A.B., Drury College, 1927	St. Luke's Hospital, Kansas City, Missouri
Evangeline E. Stenhouse Ph.B., in Ed., University of Chicago, 1916	Swedish Covenant Hospital, Chicago
Reo Miskimen Swan A.B., Muskingum College, 1926 S.B., West Virginia University, 1929	Swedish Covenant Hospital, Chicago

Frank Robert Swiatek S.B., University of Chicago, 1927	Boston City Hospital, Boston, Massachusetts
Stanislaus Andrew Szurek S.B., University of Chicago, 1927 S.M., <i>ibid.</i> , 1929	Michael Reese Hospital, Chicago
Samuel Gale Taylor, III A.B., Yale University, 1927	Cook County Hospital, Chicago
Riley Fisher Thomas, Jr. S.B., University of Chicago, 1922	Research under Prof. A. J. Carlson
Kilby Pairo Turrentine A.B., University of North Carolina, 1926	Medical College of Virginia, Division of Hospitals, Richmond, Virginia
Gerald John Van Heuvelen S.B., Dakota Wesleyan University, 1924 S.B., University of South Dakota, 1927	Norwegian American Hospital, Chicago
Abner Veitch, Jr. A.B., Muskingum College, 1926 S.B., University of North Dakota, 1929	Ancker Hospital, St. Paul, Minnesota
Edward Howard Wagenaar A.B., Hope College, 1927	Norwegian American Hospital, Chicago
John McMaster Waugh A.B., Tarkio College, 1927	Presbyterian Hospital, Chicago
Clayton Charles Weber A.B., Wabash College, 1927	Denver General Hospital, Denver, Colorado
Thomas Loid Willmon A.B., Abilene Christian College, 1928	U.S. Naval Hospital, Brooklyn, New York
Alexander Vaughn Winchell A.B., University of Wisconsin, 1925 A.M., <i>ibid.</i> , 1929	Western Pennsylvania Hospital, Pittsburgh, Pennsylvania
Frank Oliver Wood A.B., Baylor University, 1927	Hartford Hospital, Hartford, Connecticut
Oliver Marshall Wood A.B., Park College, 1927	Illinois Central Hospital, Chicago
Arthur Raymond Young A.B., University of Kansas, 1918	Harper Hospital, Detroit, Michigan

At the Close of the Summer Quarter, August 26, 1932

George Otto Baumrucker S.B., University of Chicago, 1927	West Suburban Hospital, Oak Park, Illinois
George Bancroft Benson A.B., University of Wisconsin, 1929	Los Angeles General Hospital, Los Angeles, California
James Russell Blanton A.B., University of Alabama, 1927	St. Francis Hospital, Trenton, New Jersey
Henri Stearns Denninger S.B., University of Chicago, 1926	A. M. Billings Hospital, Chicago
George Eisenberg A.B., University of Illinois, 1927	Cook County Hospital, Chicago
Clarence Kilgore Elliott A.B., University of Nebraska, 1927	Presbyterian Hospital, Chicago
William Eugene Graham S.B., Tarkio College, 1927	Los Angeles General Hospital, Los Angeles, California
Cornelius Sinnott Hagerty S.B., Notre Dame University, 1925	St. Luke's Hospital, Chicago
Arvid Theodore Johnson S.B., University of Chicago, 1928	Presbyterian Hospital, Chicago

Hilda Hertha Kroeger S.B., University of Arizona, 1924 S.M., University of Illinois, 1926	Children's Hospital, Washington, D.C.
Lester Kaufman Leserman S.B., University of Chicago, 1927	Michael Reese Hospital, Chicago
Raymond Merchant A.B., DePauw University, 1924 Ph.D., University of Illinois, 1928	Illinois Central Hospital, Chicago
Shizuto Mizuire S.B., University of Hawaii, 1927	St. Margaret Hospital, Hammond, Indiana
James Sears Rich S.B., University of Chicago, 1927	Washington Boulevard Hospital, Chicago
Irene Case Sherman Ph.B., University of Chicago, 1916 Ph.D., <i>ibid.</i> , 1924	Frances Willard Hospital, Chicago
Ernest Richard Stoehr S.B., University of Chicago, 1927	St. Luke's Hospital, Chicago
John Wallace Welsh, Jr. A.B., Wheaton College, 1925 S.B., <i>ibid.</i> , 1927	Evanston Hospital, Evanston, Illinois
Cabray Wortley A.B., Williams College, 1927	St. Luke's Hospital, Chicago

At the Close of the Autumn Quarter, December 20, 1932

Robert Sherman Baldwin S.B., University of Chicago, 1927	Cook County Hospital, Chicago
Elmer Gray Caskey S.B., Geneva College, 1927	St. Elizabeth's Hospital, Youngstown, Ohio
Lloyd Fullenwider Catron S.B., University of Michigan, 1929	St. Luke's Hospital, Chicago
George Waller Dawson A.B., University of Wisconsin, 1930	St. Luke's Hospital, Chicago
Mary Elizabeth Downing S.B., University of Chicago, 1927	Swedish Covenant Hospital, Chicago
Jesse Walter Driver A.B., University of Missouri, 1926 S.B., <i>ibid.</i> , 1929	Chicago Memorial Hospital, Chicago
Walter Eugene Gower A.B., University of Illinois, 1925 S.M., University of Chicago, 1928	Cook County Hospital, Chicago
Saul Harvey Kaplan S.B., New York University, 1928	Jewish Hospital, Brooklyn, New York
Clarence Minnema S.B., Lewis Institute, 1924	U.S. Naval Hospital, Chelsea, Massachusetts
Jeremiah Quin S.B., University of Chicago, 1927	Cook County Hospital, Chicago
Armin Frederick Schick S.B., University of Chicago, 1928	Presbyterian Hospital, Chicago
Maurice Harrison Seevers A.B., Washburn College, 1924 Ph.D., University of Chicago, 1928	Wisconsin General Hospital, Madison, Wisconsin
Khacher Hovsep Tutunjian A.B., Ripon College, 1923 A.M., <i>ibid.</i> , 1926	Chicago State Hospital, Chicago

At the Close of the Winter Quarter, March 21, 1933

George Calvin Allen A.B., University of North Carolina, 1928	Illinois Central Hospital, Chicago
Thomas D. Armstrong Ph.B., University of Chicago, 1928	St. Louis City Hospital No. 1, St. Louis, Mis- souri
Henry Weston Benjamin A.B., University of Nebraska, 1924	Presbyterian Hospital, Chicago
Irving Ely Benveniste Ph.C., University of Washington, 1927 S.B., <i>ibid.</i> , 1928	Los Angeles General Hospital, Los Angeles, Cali- fornia
Benjamin W. Bird, Jr. A.B., West Virginia University, 1928 S.B., <i>ibid.</i> , 1930	Illinois Central Hospital, Chicago
Archie Chun-Ming A.B., Columbia University, 1928 S.B., West Virginia University, 1930	Frances Willard Hospital, Chicago
Arthur Lewis Cooper A.B., University of Kentucky, 1925	Swedish Covenant Hospital, Chicago
Carvel Swift Evans A.B., University of Utah, 1927	St. Joseph Hospital, Chicago
Allan August Filek S.B., University of Chicago, 1928	Norwegian-American Hospital, Chicago
Ralph Matthew Fisher A.B., West Virginia Wesleyan College, 1927 S.B., West Virginia University, 1930	Swedish Covenant Hospital, Chicago
Moses Wolff Gordon S.B., College of the City of New York, 1928	Michael Reese Hospital, Chicago
Thomas Jackson Laughlin A.B., University of South Dakota, 1927 S.B., <i>ibid.</i> , 1930	Los Angeles General Hospital, Los Angeles, Cali- fornia
Ralph Eli Lore A.B., University of North Carolina, 1925	St. Louis City Hospital No. 1, St. Louis, Mis- souri
James Brown McClendon S.B., Howard College, 1928 S.B., University of Alabama, 1930	Hillman Hospital, Birmingham, Alabama
Louis Addison McRae S.B., University of New Mexico, 1928	St. Luke's Hospital, Chicago
Dean Alexander Moffat A.B., University of Utah, 1928	Harper Hospital, Detroit, Michigan
Clarence Olson S.B., University of Chicago, 1928	St. Luke's Hospital, Chicago
Frank Ageton Remde S.B., Northern State Teachers Col- lege, 1925 S.B., University of North Dakota, 1930	St. Luke's Hospital, Chicago
James Alan Rosen A.B., Harvard College, 1928	Los Angeles General Hospital, Los Angeles, Cali- fornia
Klenner Francis Sharp A.B., University of Utah, 1929	Harper Hospital, Detroit, Michigan

Wilfred Farber Stafford S.B., Harvard College, 1928	St. Luke's Hospital, Chicago
Leon Zacharias Wolpe A.B., University of Southern California, 1927 A.M., <i>ibid.</i> , 1918	Los Angeles General Hospital, Los Angeles, California
Stephen Aloysius Zieman A.B., Gonzaga University, 1923 A.M., <i>ibid.</i> , 1924	St. Joseph Hospital, Chicago

B. THE FOUR-YEAR CERTIFICATES

The following students received Four-Year Certificates on the completion of the four years of the Medical Course:

At the Close of the Spring Quarter, June 14, 1932

Gaspar Mathew Adamo S.B., West Virginia University, 1930	Morrisania City Hospital, Bronx, New York
William Hall Allman A.B., West Virginia University, 1929 S.B., <i>ibid.</i> , 1930	Norwegian American Hospital, Chicago
Lewis Hamelton Armentrout, Jr. A.B., West Virginia University, 1929 S.B., <i>ibid.</i> , 1930.	Rockford Hospital, Rockford, Illinois
William Earl Barry S.B., Kansas State Teachers' College, 1926	Denver General Hospital, Denver, Colorado
Robert Allen Behrendt A.B., University of Southern California, 1927	A. M. Billings Hospital, Chicago
Joseph Berlin S.B., University of Pittsburgh, 1928	St. Francis Hospital, Pittsburgh, Pennsylvania
Richard Beskow A.B., Trinity University, 1928	Harper Hospital, Detroit, Michigan
Leslie Jarrett Braudwell A.B., Trinity College, 1921	St. Joseph Hospital, Chicago
Samuel B. Broder A.B., University of Pennsylvania, 1926	Garfield Memorial Hospital, Washington, D.C.
Eugene Jex Capener A.B., University of Utah, 1928	Washington Boulevard Hospital, Chicago
Oscar O. Christianson A.B., St. Olaf College, 1928	St. Luke's Hospital, Chicago
Irving M. Cohn A.B., Kalamazoo College, 1927	Cook County Hospital, Chicago
Marvin Merton Dickey A.B., University of South Dakota, 1930	Presbyterian Hospital, Chicago
Anthony Donovan A.B., University of Wisconsin, 1928	Columbia Hospital, Milwaukee, Wisconsin
Robert Hervey Duguid A.B., University of South Dakota, 1930	St. Louis City Hospital No. 1, St. Louis, Missouri
Martin Dworkin A.B., West Virginia University, 1928 S.B., <i>ibid.</i> , 1930	
Rolf vanKervel Eggers A.B., University of North Dakota, 1930 S.B., <i>ibid.</i> , 1930	Washington Boulevard Hospital, Chicago

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| Elmer Francis Egleston
A.B., University of Missouri, 1929
S.B., <i>ibid.</i> , 1930 | Chicago Memorial Hospital, Chicago |
| Carl August Erickson
S.B., University of Chicago, 1928 | |
| Charles Olaf Evanson
A.B., University of North Dakota, 1928
S.B., <i>ibid.</i> , 1930 | Washington Boulevard Hospital, Chicago |
| David Feingold
A.B., Johns Hopkins University, 1928 | Sinai Hospital, Baltimore, Maryland |
| Murray Bernard Ferderber
A.B., West Virginia University, 1930
S.B., <i>ibid.</i> , 1930 | St. Francis Hospital, Pittsburgh, Pennsylvania |
| Jerome Fishman
S.B., University of Chicago, 1928 | Evangelical Hospital, Chicago |
| Sigmund Gabe
A.B., College of the City of Detroit,
1928 | St. Mary's Hospital, Detroit, Michigan |
| Reuben Breyfogel Gaines
A.B., Jamestown College, 1926 | Henry Ford Hospital, Detroit, Michigan |
| Lewis Jennings Geerlings
A.B., Hope College, 1928 | Presbyterian Hospital, Chicago |
| Harry Charles Goldberg
S.B., Rutgers University, 1928 | Jersey City Hospital, Jersey City, New Jersey |
| Irving Isidore Gordon
A.B., Cornell University, 1927
A.M., <i>ibid.</i> , 1928 | Beth Israel Hospital, New York City, New York |
| Gene Burton Haber
A.B., Harvard College, 1928 | City Hospital of Akron, Akron, Ohio |
| Stanley Laird Hardy
A.B., Brigham Young University, 1928 | Latter-Day Saints Hospital, Salt Lake City,
Utah |
| Erwin Frederick Hoffman
A.B., University of Wisconsin, 1929 | St. Mary's Hospital, Madison, Wisconsin |
| Philip O. C. Johnson
A.B., St. Olaf College, 1928 | Presbyterian Hospital, Chicago |
| Clare Colleston Jones
A.B., University of North Dakota, 1928
S.B., <i>ibid.</i> , 1930 | Illinois Central Hospital, Chicago |
| Bernard Sarkis Kalayjian
A.B., Yankton College, 1927
S.B., University of South Dakota, 1929
A.M., <i>ibid.</i> , 1929 | Presbyterian Hospital, Chicago |
| Harvey Alexander Karam
S.B., University of Akron, 1927 | Swedish Covenant Hospital, Chicago |
| Clinton Sawyer Main Koerner
A.B., Bradley Polytechnic Institute,
1928 | Frances E. Willard Hospital, Chicago |
| Donald Reid Laing
A.B., University of Michigan, 1926 | |
| Benjamin Herzl Lerner
S.B., University of Chicago, 1928 | Mt. Sinai Hospital, Chicago |
| Herbert Julian Levin
S.B., New York University, 1928 | St. Francis Hospital, Pittsburgh, Pennsylvania |
| Max Alvin Levine
A.B., University of Oregon, 1928 | Los Angeles County General Hospital, Los Angeles,
California |

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| Jack Levitt
A.B., University of Minnesota, 1930 | Lutheran Memorial Hospital, Chicago |
| Leland Stanford Lewis
A.B., University of North Dakota, 1928
S.B., <i>ibid.</i> , 1930 | Norwegian-American Hospital, Chicago |
| Catharine Elizabeth Logan
A.B., Lake Forest College, 1924 | Frances E. Willard Hospital, Chicago |
| Draper Lyon Long
A.B., Grinnell College, 1928 | Iowa Methodist Hospital, Des Moines, Iowa |
| DeWitt Clinton Mead
A.B., University of Alabama, 1930 | Harper Hospital, Detroit, Michigan |
| Alden Herbert Miller
A.B., University of Southern California, 1927 | Los Angeles County General Hospital, Los Angeles, California |
| Harry Bernard Miller
A.B., University of Alabama, 1930 | St. Francis Hospital, Pittsburgh, Pennsylvania |
| James August Nelson
A.B., University of Minnesota, 1916 | St. Barnabas Hospital, Minneapolis, Minnesota |
| Mitsuo Nishihara
S.B., University of Michigan, 1928 | |
| Harold Judd Noyes
Ph.B., University of Chicago, 1923
S.B., University of Illinois, 1928
D.D.S., <i>ibid.</i> , 1928 | Presbyterian Hospital, Chicago |
| Alice M. Parsons
A.B., Agnes Scott College, 1917 | Michael Reese Hospital, Chicago |
| John Baptist Plastino
A.B., University of Michigan, 1926 | Los Angeles County General Hospital, Los Angeles, California |
| Louis Jefferson Ring
A.B., University of North Carolina, 1928 | Harper Hospital, Detroit, Michigan |
| S. Kenneth Robinson
S.B., Michigan State College, 1918 | St. Louis City Hospital No. 1, St. Louis, Missouri |
| Donald H. Rudser
A.B., University of North Dakota, 1928
S.B., <i>ibid.</i> , 1930 | |
| Louis Sheinin
S.B., University of Akron, 1927 | City Hospital of Akron, Akron, Ohio |
| Hollis Edward Sides
A.B., University of Southern California, 1928 | Los Angeles County General Hospital, Los Angeles, California |
| Maurice Zolmon Siltan
S.B., Harvard College, 1928 | Los Angeles County General Hospital, Los Angeles, California |
| Harry Thomas Southworth, Jr.
S.B., University of Idaho, 1928 | Washington Boulevard Hospital, Chicago |
| Winton Franklin Swengel
A.B., University of North Dakota, 1928
S.B., <i>ibid.</i> , 1930 | Los Angeles County General Hospital, Los Angeles, California |
| Leon John Tragerman
S.B., College of the City of New York, 1928 | Los Angeles County General Hospital, Los Angeles, California |
| Frederick John Vollmer
A.B., University of North Dakota, 1927
S.B., <i>ibid.</i> , 1930 | St. Barnabas Hospital, Minneapolis, Minnesota |

Arnold Wilson	Hillman Hospital, Birmingham, Alabama
S.B., Birmingham Southern College, 1928	
S.B., University of Alabama, 1930	
Charles Davis Wood	Henry Ford Hospital, Detroit, Michigan
A.B., Yankton College, 1928	
S.B., University of South Dakota, 1929	

At the Close of the Summer Quarter, August 26, 1932

William Reuben Albus	Presbyterian Hospital, Chicago
S.B., Pennsylvania State College, 1917	
Alice Childs	Swedish Covenant Hospital, Chicago
S.B., Trinity University, 1924	
Cecil Reinhart Gilbertsen	Illinois Central Hospital, Chicago
A.B., Jamestown College, 1926	
S.B., University of North Dakota, 1930	
Moses Hartman	Mt. Sinai Hospital, Chicago
A.B., Western Reserve University, 1927	
A.M., University of Michigan, 1928	
John Johnston Keith	Washington Boulevard Hospital, Chicago
A.B., Amherst College, 1928	
Ralph Graham McAllister	West Suburban Hospital, Oak Park
S.B., Monmouth College, 1926	
Clarence Webster Monroe	Presbyterian Hospital, Chicago
S.B., Whitman College, 1928	
Louis Benjamin Newman	Cook County Hospital, Chicago
S.B., Armour Institute of Technology, 1921	
Donald Herbert Root	Illinois Central Hospital, Chicago
A.B., Dakota Wesleyan University, 1928	
William Stein	Michael Reese Hospital, Chicago
A.B., University of Alabama, 1928	
Rolf Christian Syvertsen	
S.B., Dartmouth College, 1918	
Paul Gordon Tobin	Presbyterian Hospital, Chicago
S.B., University of Notre Dame, 1928	
Nicholas Zbitnoff	Frances Willard Hospital, Chicago
A.B., University of Saskatchewan, 1924	

At the Close of the Autumn Quarter, December 20, 1932

George Dows Cannon	
A.B., Lincoln University, 1924	
Leonard DePonceau	Allegheny General Hospital, Pittsburgh, Penn- sylvania
S.B., University of Pittsburgh, 1927	
Rudolph P. Leyers	Illinois Central Hospital, Chicago
S.B., University of Chicago, 1929	
Silas Sinclair Snider	St. Luke's Hospital, Chicago
A.B., Dartmouth College, 1929	

At the Close of the Winter Quarter, March 21, 1933

Andrew Russell Anderson	St. Joseph Hospital, Chicago
A.B., University of Wisconsin, 1929	

Samuel S. Blankstein A.B., University of Wisconsin, 1930 A.M., <i>ibid.</i> , 1931	Cook County Hospital, Chicago
Bernard Michael Blum A.B., Columbia University, 1929	Los Angeles County General Hospital, Los Angeles, California
Harold DeCou Bockoven A.B., DePauw University, 1929	Miami Valley Hospital, Dayton, Ohio
Virgil Marlow Bradshaw S.B., University of Florida, 1923 S.M., St. Louis University, 1930	Municipal Contagious Disease Hospital, Chicago
Thomas Peck Butcher Ph.B., University of Chicago, 1926	Kansas City General Hospital, Kansas City, Missouri
Louis Cohen A.B., Harvard University, 1929 A.M., University of Alabama, 1931	Cook County Hospital, Chicago
William Leon Cole S.B., Northeastern State Teachers' College, 1929	St. Joseph Hospital, Chicago
Ray Forest Crawford S.B., University of Chicago, 1929	Illinois Central Hospital, Chicago
John Alfred Cremer A.B., Calvin College, 1928	Kankakee State Hospital, Kankakee
Joseph Brilling Cushman A.B., DePauw University, 1927	Methodist Episcopal Hospital, Indianapolis, Indiana
Angus Jacques DePinto S.B., University of Chicago, 1929	Passavant Hospital, Pittsburgh, Pennsylvania
Elizabeth Sherman Ells A.B., Smith College, 1924	Detroit Receiving Hospital, Detroit, Michigan
Robert Durkee Fairchild A.B., Dartmouth College, 1929	Presbyterian Hospital, Chicago
Stanton Abeles Friedberg A.B., Dartmouth College, 1929	Michael Reese Hospital, Chicago
Max Davis Goldman A.B., University of Alabama, 1929	Cedars of Lebanon Hospital, Los Angeles, California
Milton Goldman S.B., University of Wisconsin, 1925	Kansas City General Hospital, Kansas City, Missouri
George Franklin Gsell A.B., University of Kansas, 1929	Latter Day Saints Hospital, Salt Lake City Utah
Joseph LaReno Hansen A.B., University of Utah, 1929	Illinois Central Hospital, Chicago
Benjamin Franklin Hart A.B., Eastern Kentucky State Teachers College, 1925	Frances E. Willard Hospital, Chicago
Chisato Hayashi A.B., University of Hawaii, 1925	Women and Children's Hospital, Chicago
Marie Agnes Hinrichs A.B., Lake Forest College, 1917 Ph.D., University of Chicago, 1923	Ancker Hospital, St. Paul, Minnesota
Jack Hoekzema A.B., Calvin College, 1929	Evangelical Hospital, Chicago
Kurt Edward Hohman S.B., University of Chicago, 1929	
Helen Holt A.B., Northwestern University, 1922	

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| Francis Wyatt Huston
S.B., Tarkio College, 1929 | Iowa Methodist Hospital, Des Moines, Iowa |
| Irvin Arthur Ihrke
S.B., University of Chicago, 1930 | Oak Park Hospital, Oak Park |
| David Meredith Jenkins
S.B., Illinois Wesleyan University, 1929 | St. Luke's Hospital, Chicago |
| Robert Odin Jermstad
A.B., St. Olaf College, 1929
S.B., University of South Dakota, 1931 | Charleston General Hospital, Charleston, West Virginia |
| Milton Morton Kardon
A.B., University of Alabama, 1930 | |
| Aaron Keinigsberg
S.B., University of Chicago, 1928 | Cook County Hospital, Chicago |
| Albert David Kistin
A.B., Cornell University, 1927
A.M., Columbia University, 1928 | |
| Abraham Ralph Koransky
S.B., Purdue University, 1928 | Cook County Hospital, Chicago |
| S. Robert Lantieri
A.B., Cornell University, 1929 | Good Samaritan Hospital, Portland, Oregon |
| John Lockwood Lindquist
S.B., University of Chicago, 1929
S.M., <i>ibid.</i> , 1931 | Municipal Contagious Disease Hospital, Chicago |
| Reuben Rush Lisse
S.B., University of Chicago, 1929 | Mt. Sinai Hospital, Chicago |
| Alton Joyce Merrick
A.B., Nebraska Wesleyan University, 1929 | Kansas City General Hospital, Kansas City, Missouri |
| Cecil John Metcalf
S.B., University of Wisconsin, 1929 | Rhode Island Hospital, Providence, Rhode Island |
| Ernest Blair Miller
S.B., Ashland College, 1928
S.B., West Virginia University, 1931 | Henry Ford Hospital, Detroit, Michigan |
| Edwin Frank Neckermann
S.B., University of Chicago, 1929 | Presbyterian Hospital, Chicago |
| Ruth Monica O'Brien
S.B., University of Chicago, 1929 | Los Angeles General County Hospital, Los Angeles, California |
| Merrill Lee Oldroyd
A.B., University of Utah, 1930 | Salt Lake General Hospital, Salt Lake City, Utah |
| Bryce Kenneth Ozanne
A.B., Lawrence College, 1929 | Washington Boulevard Hospital, Chicago |
| Albert Upham Peacock
A.B., Colby College, 1927 | Hartford Hospital, Hartford, Connecticut |
| McKinnie Lee Phelps
S.B., Monmouth College, 1929 | |
| Robert Willard Wilson Phillips
S.B., West Virginia Wesleyan College, 1929
S.B., West Virginia University, 1931 | Swedish Covenant Hospital, Chicago |
| Alice Margaret Posey
A.B., Kansas University, 1927
M.S., <i>ibid.</i> , 1928 | Grant Hospital, Chicago |
| George Hamlin Putnam
S.B., Howard College, 1929 | |

Joseph Mercer Rampona M.E., Cornell University, 1925	Rochester General Hospital, Rochester, New York
Louis Edwards Rampona S.B., Princeton University, 1928	Harper Hospital, Detroit, Michigan
Jackson Townsend Ramsaur A.B., Duke University, 1929	Swedish Covenant Hospital, Chicago
Spencer Snow A.B., University of Utah, 1928	Salt Lake General Hospital, Salt Lake City, Utah
Henry Staff A.B., University of North Dakota, 1930 S.B., <i>ibid.</i> , 1931	St. Vincent's Hospital, Portland, Oregon
Alice Hester Stewart S.B., University of West Virginia, 1929	Mt. Vernon Hospital, Mt. Vernon, New York
David Taylor S.B., Iowa State College, 1923	Miami Valley Hospital, Dayton, Ohio
Roger Schaudt Thompson A.B., University of North Dakota, 1930 S.B., <i>ibid.</i> , 1931	Swedish Hospital, Seattle, Washington
James William Tobin S.B., University of Notre Dame, 1929	St. Luke's Hospital, Chicago
George Wilks Warrick A.B., Howard College, 1929	Presbyterian Hospital, Chicago
Walter Norman Wiborg S.B., University of Chicago, 1928	Chicago Memorial Hospital, Chicago
Charles Redick Wylie A.B., University of Southern California, 1930	Los Angeles General County Hospital, Los Angeles, California
Theodore Nathan Zekman A.B., University of Minnesota, 1929 S.B., <i>ibid.</i> , 1931	Cook County Hospital, Chicago

THE SCHOOL OF MEDICINE OF THE DIVISION OF THE BIOLOGICAL SCIENCES

A. FOUR-YEAR CERTIFICATES GRANTED

June, 1932

Louis Edward Barron
Harold Clay Huston

John Wooten Meredith
John Harold Mills

August, 1932

Charles Elmer Barrett
Donald Wood Creel

Bernard Evan Kane

December, 1932

Justin Arthur Frank
Townsend Baer Friedman

John Hubert Glynn
Josel Francis Sammet

March, 1933

Alfred James Benesh
Leon Jacob Galinsky
Irene Milliken Josselyn

Solomon Salkind Kauvar
Florance Leo Sullivan

B. DEGREES OF DOCTOR OF MEDICINE

June, 1932

Alexander Henry Davis	Guillermo Alfredo Pacheco
Vernon Richard DeYoung	Robert Trigg Porter
Adelaide McFadyen Johnson	Grace Lucile Robey
William Moses Jones	William McCullough Tuttle

Arthur John Vorwald

August, 1932

Rayburn Castle Austin	Livingston Eli Josselyn, III
Egbert Howard Fell	George William Stuppy
Bruce Allan Hollister	

December, 1932

Chester Davis	Cornelius A. Hospers
Lois Amelia Day	*Thomas Leiper Kane
Alfred Carr Dick	Alven Maxwell Weil

March, 1933

Virginia Jackola

C. DEGREES OF DOCTOR OF PHILOSOPHY IN THE MEDICAL SCIENCES

June, 1932

William Burrows	Hygiene and Bacteriology
Tsung Han Chang	Physiology
Garman Harlow Daron	Anatomy
James Ernest Davis	Medicine
Isidore Gersh	Anatomy
Robert Stewart Jason	Pathology

August, 1932

Mary Estill Caldwell	Hygiene and Bacteriology
John Theobald Hauch	Physiological Chemistry and Pharmacology
Meyer Samuel Mishkis	Medicine

December, 1932

Edward William Wallace	Physiological Chemistry and Pharmacology
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March, 1933

James Francis Regan	Physiology
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*Deceased

LIST OF STUDENTS

I. SCHOOL OF MEDICINE OF THE DIVISION OF THE
BIOLOGICAL SCIENCES

The following list includes only those students who were in attendance during one or more quarters during the academic year 1932-33.

NOTE.—The naming of a degree not followed by the name of an institution in parentheses is understood to mean a degree conferred at the University of Chicago.

In cases in which no institution is named, it is understood to mean that the student began his college career at the University of Chicago.

In cases in which no state is mentioned, Illinois is understood.

ABBREVIATIONS.—U. = University; C. = College; S. = School; Inst. = Institute.

PERIOD OF RESIDENCE.—s = Resident during Summer Quarter, 1932; a = during Autumn Quarter, 1932; w = during Winter Quarter, 1933; sp = during Spring Quarter, 1933.

(Starred (*) names indicate clinical students in Billings Hospital)

- *Aaron, Ruth, s a, w, sp, Chicago, B.A. (U. of Wisconsin) '31.
- Abrams, Jack Samuel, a, w, sp, Chicago. S.B. '32.
- Adler, Samuel, a, w, sp, Trenton, N.J. S.B. (Rutgers U.) '32.
- Allweiss, M. David, a, w, sp, Harlowton, Mont. S.B. (U. of Washington) '31.
- Alpert, Ruth Stern, s, a, Chicago. S.B. (Northwestern U.) '31.
- Anis, Estelle, a, w, sp, Chicago. S.B. '32.
- Ashley, Paul, a, w, sp, Chicago. S.B. '32.
- *Banks, Sam Wallace, w, sp, Chicago. S.B. '30
- *Barrett, Charles Elmer, s, Ogden, Utah. S.M. (Utah Agricultural C.) '24.
- Beatty, Thomas Douglas, a, w, sp, Chicago. S.B. (U. of Illinois) '32.
- Beatty, Thomas Douglas, a, w, sp, Chicago. S.B. (U. of Illinois) '32.
- Beinarauskas, Peter Joseph, sp, Chicago.
- *Benesh, Alfred James, s, a, w, Tyndall, S.D. A.B. (U. of South Dakota) '26.
- *Beswick, William Frederick, a, w, sp, Passaic, N.J. A.B. (Hope C.) '29.
- *Blake, Kenneth Wilber, s, a, w, sp, Chicago. S.B. '30.
- Bloemers, Harms Wilmer, s, a, w, sp, Cedar Grove, Wis. A.B. (Hope C.) '31.
- Bodian, David, a, w, sp, Chicago. S.B. '31.
- Bolonik, Samuel Jarvis, a, w, sp, Chicago. S.B. '31.
- Borkon, Eli Leroy, s, Chicago. S.B. '31.
- Bornstein, Johann, sp, Paterson, N.J. S.B. (Rutgers U.) '32.
- Bosworth, Wesley Franklin, sp, Elgin. S.B. '33.
- Boyd, Richard Fay, s, a, w, Chicago. A.B. (U. of Illinois) '28.
- *Branham, Sara Elizabeth, a, w, sp, Washington, D.C. Ph.D. '23.
- *Brislen, Andrew Jackson, s, a, w, sp, Chicago. S.B. '31.
- *Britton, Donald Medhurst, s, a, Chicago. A.B. (U. of Wisconsin) '32.
- Brown, Harry Egbert, a, w, sp, Tacoma, Wash. S.B. (College of Puget Sound) '32.
- *Brown, Meyer, s, a, w, sp, Chicago. S.B. '31.
- *Bruyere, Paul Tulane, a, w, sp, Chicago. A.B. (Princeton U.) '30.
- *Bryant, J. Edmund, s, Moorhead, Minn. S.B. (Jamestown C.) '23.
- Bucklin, Bethana, a, w, sp, West Bend, Wis. S.B. (U. of Wisconsin) '32.
- *Burkholder, Theodore McCoy, s, a, w, sp, Chicago. S.B. '29.
- Burns, Gordon Taylor, s, w, Berwyn. S.B. '30.
- *Burt, Arthur Cullen, s, a, w, sp, Fremont, Mich. S.B. (Northwestern) '31.

- Byrd, Wallace, *s, a, w, sp*, Tampa, Fla. A.B. (U. of Florida) '25.
- Cantor, Israel Bernard, *a, w, sp*, Petersburg, Va. S.B. (U. of Virginia) '32.
- Cashmore, William Francis, *a, w*, Dillon, Mont. S.B. (Montana State C.) '28.
- Castles, Ruth Palmer, *s, a, w, sp*, Chicago. S.B. (Mississippi State C. for Women) '22.
- *Changnon, Eugene Almar, *a, s, sp*, St. Anne. S.B. '28.
- Cherner, Abraham Meyer, *a, w, sp*, Chicago. S.B. '32.
- *Clancy, Charlotte Louise, *s, a, w, sp*, Chicago A.B. (Albion C.) '29.
- Cohen, Benjamin B. *a, w, sp*, Indiana Harbor, Ind. A.B. (U. of Indiana) '30.
- Cohen, Mabel Blake, *sp*, Chicago. S.B. '31.
- Cohen, Marshall, *a, w*, Chicago. S.B. '31.
- *Cole, Versa Viola, *s, a*, Kalamazoo, Mich. Ph.D. '31.
- Comroe, Jules Belasco, *sp*, Chicago.
- Comroe, Leon Belasco, *a, w, sp*, Chicago.
- *Cook, Donald D., *s, a, w, sp*, Portland, Ore. A.B. (U. of Southern California) '27.
- Cook, Helen, *s, a, w, sp*, Lanham, Maryland. A.B. (Goucher C.) '29.
- Cooperman, Norman Roy, *sp*, Chicago. S.M. '32.
- *Covell, Walter Page, *s, a, w, sp*, Chicago Ph.D. (U. of Minnesota) '26.
- *Crawford, Robert Roe, *a, w, sp*, Chicago. S.B. (Oberlin C.) '27.
- *Creel, Donald Wood, *s*, Angola, Ind. S.B. (Purdue U.) '25.
- Curtis, William Long, *s*, Seattle, Wash. S.B. (U. of Washington) '30.
- *Dack, Gail Monroe, *sp*, Chicago. Ph.D. '27.
- Darling, John Pendleton, *a, w, sp*, Des Moines, Iowa. S.B. (Princeton U.) '32.
- *Darst, John Harold, *a, w, sp*, Portland, Ore. S.B. (State C. of Washington) '28.
- Day, Ernest Christian, *s, a, w, sp*, Chicago. S.B. '31.
- *de Savitsch, Eugene Constantine, *sp*, Chicago. A.B. (U. of Denver) '31.
- *DeYoung, Willard, *s, a, w, sp*, Chicago, S.B. (Wheaton C.) '30.
- Dillenbeck, Howard, *s, a, w, sp*, Chicago. S.B. '31.
- *Dinerman, Israel Aaron, *a, w, sp*, Lowell, Mass. A.B. (Harvard U.) '29.
- Dix, Albert Sidney, *a, w, sp*, Mobile, Ala. S.B. (Howard C.) '31.
- Doktorsky, Abraham Isadore, *sp*, Chicago.
- Dolinsky, Martin, *a, w, sp*, Brooklyn, N.Y. A.B. (Cornell U.) '32.
- *Donaldson, Lilian, *s, a, w, sp*, Chicago. A.M. (U. of Kansas) '25.
- Dorrance, Thomas Olney, *s, a, w, sp*, Coldwater, Mich. A.B. (U. of Michigan) '31.
- Drobinsky, Miguel, *a, w, sp*, Chicago. S.B. '32.
- Ebert, Richard Vincent, *a, w, sp*, Chicago.
- *Edmiston, James Righter, *s, a, w, sp*, Lincoln, Neb. A.B. (U. of Nebraska) '30.
- Elliott, William E., *s*, Chicago. A.B. (Ohio Wesleyan U.) '26.
- Ewald, William Lincoln, *s, a, w, sp*, Chicago. S.B. (U. of Illinois) '31.
- Farley, Otis Rhanor, *sp*, Bellingham, Wash. A.B. (U. of California) '33.
- Felsher, Zachery, *a, w, sp*, Chicago. S.B. '31.
- *Fisher, Cloyde Reber, *s, w, sp*, Chicago. A.B. (Butler C.) '31.
- Fleming, Joan, *sp*, Bloomington, A.M. (Oberlin C.) '28.
- Forbes, Stephen Alfred, *a, w, sp*, State College, Pa. S.B. (Penn State C.) '32.
- *Foster, Paul Cameron, *s*, New Orleans, La. Ph.D. (Tulane U.) '30.
- *Fox, Erhard R. William, *a, w, sp*, Chicago. S.B. (U. of Illinois) '30.
- *Fox, John Perrigo, *s, a, w, sp*, Chicago. S.B. (Haverford C.) '29.
- *Frank, Justin Arthur, *s, a,,* Chicago. S.B. '28.
- Freeman, William Neil, *sp*, St. Cloud, Minn.

- *Friedman, Maurice Harold, *s, a, w, sp*, Chicago. Ph.D. '28.
- *Friedman, Townsend Baer, *s, a*, Pittsburgh, Pa. S.B. (U. of Pittsburgh) '27.
- *Friend, Maurice Robert, *a, w, sp*, Los Angeles, Cal. A.B. (Stanford U.) '30.
- Frye, Garnett Milton, *s*, Christiansburg, Ky. A.B. (U. of Kentucky) '29.
- Fuchs, Theodore Albert, *sp*, Chicago.
- *Fuller, Muriel Kling, *s, a, w, sp*, Chicago. S.B. '31.
- Fyvie, James Herbert, *a, w, sp*, McMillan, Mich. A.B. (Olivet C.) '31
- *Galinsky, Leon Jacob, *s, a, w, sp*, Sioux City, Iowa. A.B. (Harvard C.) '28.
- Garrick, Samuel, *a, w, sp*, Chicago.
- Gates, Stephen Elmer, *s, a, w, sp*, Akron, Ohio. A.B. (U. of Dubuque) '30
- *Gedgoud, John Leo, *a, w, sp*, Chicago. S.B. '30.
- Gentry, M. Elizabeth Faddis, *a, w*, Austin, Texas. A.M. (Syracuse U.) '27
- Giesen, Conrad William, *a, w, sp*, Superior, Wis. A.B. (U. of Michigan) '31.
- *Glynn, John Hubert, *s, a*, Chicago. S.M. (McGill U.) '31.
- Goodman, Melvin Oscar, *a, w, sp*, Manchester, N.H. A.B. (Brown U.) '32.
- Goodpasture, Willard Carter, *a, w, sp*, Chicago. A.B. (Princeton U.) '32.
- Graham, Oscar J., *sp*, Springdale, Ky. S.B. (Eastern State Teachers C.) '30.
- Grauman, Samuel Jacob, *s, a, w*, Milwaukee, Wis. S.B. (Yale U.) '31.
- Greene, Lawrence Francis, *a, w, sp*, Chicago. S.B. '32.
- Greenman, Robert Brownell, *a, w, sp*, Chicago. S.B. '32.
- Greenwald, Seymour, *a, w, sp*, Chicago. S.B. '32.
- Grisamore, Thomas L., *s, a, w*, Wilmette. A.B. (Colgate U.) '31.
- Hagle, Marie Anna, *s*, St. Joseph, Mo. S.B. (Lewis Inst.) '31.
- Haft, Stanley Samuel, *a, w, sp*, Red Bank, N.J. A.B. (Rutgers U.) '31.
- *Hall, Durward Gorham, *s*, Springfield, Mo. A.B. (Drury C.) '31.
- Hall, James Whitney, Jr., *s, a, w, sp*, Chicago. S.B. '30.
- *Halmos, John William, *s*, Chicago. S.B. '30.
- Hambourger, Walter E., *s*, Chicago. Ph.D. (Western Reserve U.) '31.
- Hamilton, Howard B., *a, w, sp*, Dayton, Ohio. S.B. '31.
- *Haney, Hance Francis, *s, a*, Westfield, Wis. A.M. (U. of Wisconsin) '28.
- *Hansen, Milton Bruce, *a, w, sp*, Moline. A.B. (Augustana C.) '28.
- *Harms, Herman Paul, *s, a, w, sp*, Archer, Iowa. A.B. (Hope C.) '29.
- *Harris, Hinman Alexander, *s, a, w, sp*, Chicago. S.B. '27.
- Harris, Lloyd Edwin, *a, w, sp*, Sterling. A.B. (Wittenberg C.) '32.
- *Hauch, John Theobold, *s, a, w, sp*, Chicago. Ph.D. '32.
- *Heaney, Harry Gordon, *a, w, sp*, Chicago. S.B. (U. of the South) '28.
- *Henderson, Roger Campbell, *a, w, sp*, Hanover. S.B. (Monmouth C.) '29.
- *Heninger, Owen Pratt, *s, a, w, sp*, Chicago. A.B. (U. of Utah) '30.
- Henry, Lucy Dell, *s, a, w, sp*, Evanston. S.B. '22.
- *Herrin, Raymond Clyde, *s*, Hartford City, Ind. Ph.D. (U. of Wisconsin) '28.
- Ho, Thomas Junshee, *s, a, w*, Chicago. S.B. (Lewis Inst.) '30.
- Hodgson, Edward Russell, *a, w, sp*, Spokane, Wash. S.B. (U. of Washington) '32.
- Hoffman, Heinz Otto E., *a, w, sp*, Chicago. S.B. '31.
- Hollands, Robert Arthur, *a, w, sp*, River Forest, S.B. '33.
- Holloman, Houston Jay, *a, w, sp*, Princeton. A.B. (U. of Arkansas) '28.
- *Hospers, Cornelius Albertus, *s, a*, Dixon. Ph.D., '32.
- Howell, Daniel Glyn, *sp*, Fargo, N.D. S.B. (North Dakota Agricultural C.) '32.
- Huff, Elizabeth, *w, sp*, Chicago.

- *Huston, Harold Clay, *s*, Bellefontaine, Ohio. S.B. '28.
 Hyman, Mayer, *a, w, sp*, Roxbury, Mass. (Mass. Inst. of Technology) '31.
 Johnson, Lent Clifton, Jr., *s, a, w, sp*, Chicago. S.B. '31.
 *Johnson, Victor Einar, *s, a*, Chicago. Ph.D., '30.
 *Josselyn, Irene Milliken, *s, a, w*, Chicago. S.M. (Smith C.) '26.
 *Josselyn, Livingston Eli, III, *s*, Chicago. S.B. '27.
 Julian, Ormand Clinkinbeard, *sp*, Chicago.
 Kadin, Maurice, *a, w, sp*, Chicago. S.B. '33.
 Kanai, Matsukichi, *w*, Kealia, Hawaii. S.B. (Northwestern U.) '29.
 Kaplan, Louis, *a, w, sp*, Chicago.
 Kaplan, Louis Harvey, *a, w, sp*, Chicago. S.B. '33.
 *Kane, Bernard Evan, *s*, Chicago. S.B. '26.
 *Kauvar, Solomon Salkind, *s, a, w*, Denver, Colo. A.B. (Denver U.) '29.
 *Keller, Allen Dudley, *s*, Mink Creek, Idaho. Ph.D. (Cornell U.) '29.
 Kenton, Harold Benjamin, *s, a*, Chicago. S.B. '30.
 Kim, Naomi, *s, a, w*, Seoul, Korea. S.B. (Wheaton C.) '30.
 Kingman, John Richard, *s, a, w*, Ottawa. A.B. (St. Stephens C.) '31.
 Kingston, George Ross, *w, sp*, Seattle, Wash. S.M. (U. of Washington) '32.
 Klassen, Karl Peter, *a, w, sp*, Waterloo, Ont. S.B. (Wheaton C.) '31.
 Knisely, Melvin Henry, *s, a, w, sp*, Chicago. A.B. (Albion C.) '27.
 Korogodsky, Herman, *a, w, sp*, Chicago. S.B. '32.
 Krafchik, Louis Lipman, *a, w, sp*, New Brunswick, N.J. S.B. (Rutgers U.) '32.
 Kupersmith, Harry, *a, w, sp*, Chicago.
 Larson, Myron Willard, *w, sp*, Chicago. S.B. '32.
 Laufman, Harold, *a, w, sp*, Chicago. S.B. '32.
 Lefkin, Philip, *a, w, sp*, Brooklyn, N.Y. S.B. (Columbia U.) '31.
 Lennette, Edwin Herman, *s, w*, Pittsburgh, Pa. S.B. '31.
 *LeRoy, George Veach, *a, w, sp*, Pittsburgh, Pa. S.B. (U. of Pittsburgh) '32.
 Lesemann, Frederick Joseph, *sp*, Chicago.
 Levin, Noah Bernard, *a, w, sp*, Chicago. S.B. '33.
 Lieberman, Abraham Albert, *a, w, sp*, Chicago. S.B. '32.
 Loosli, Clayton, Girr, *s, a, w, sp*, Ashton, Idaho. S.M. (U. of Idaho) '31.
 Ludwig, Frank Frederick, *sp*, Chicago.
 *Maharajh, Deonarayan, Omah, *s, a, w, sp*, Siparia, Trinidad, B.W.I. S.B. '31.
 Malbin, Barney Ivan, *a, w, sp*, Cleveland, Ohio. A.B. (Ohio State U.) '31.
 Marcovich, Abraham W., *a, w, sp*, East Chicago, Ind. S.B. '32.
 *Maresh, Frank, *s*, Madison, Wis. S.M. (U. of Wisconsin) '31.
 *Margolis, Alfred, *a, w, sp*, Newark, N.J. A.B. (Rutgers U.) '30.
 Markin, Leo, *sp*, Chicago. S.B. '33.
 Marron, James William, *a, w, sp*, Chicago.
 Marron, John Richard, *a, w, sp*, Chicago.
 Mason, Ulysses Grant, Jr., *a*, Chicago. A.B. (Amherst C.) '29.
 Mather, J. Winford, *s, a, w, sp*, Springdale, Iowa. A.B. (Penn C.) '22.
 Mayne, Walter, *a, w, sp*, Evanston. S.B. '33.
 *McBean, James Blish, *a, w, sp*, Chicago. S.B. '30.
 McElligott, Maurice James, *s, a, w, sp*, Cambridge, Mass. (Notre Dame U.) '00.
 Merrian, Wallace, *w, sp*, Chicago. Ph.B. '29.
 Metzinger, Georgie, *a, w, sp*, Fargo, N.D. S.B. (North Dakota Agr. C.) '31.

- Miller, Joseph Leggett, Jr., *a, w, sp*, Chicago. S.B. '31.
- Mindrup, Robert George, *a, w, sp*, Edwardsville. U. of Illinois.
- Monroe, Stanley Edwin, *s, a, w, sp*, Chicago. A.B. (U. of Michigan) '25.
- Moseley, John Edward, *a, w, sp*, New York, N.Y. S.B. (Harvard U.) '32.
- Munk, Ivan Arthur, *a, w*, Brimfield, Ind. A.B. (DePauw U.) '31.
- Murphy, Edward Simon, *s, a, w*, Dixon. S.B. (Notre Dame U.) '31.
- Nachman, Adolph Roy, *s, a, w, sp*, Chicago. S.B. '32.
- Nadler, Samuel Bernard, *s*, New Orleans, La. Ph.D. (Harvard U.) '31.
- *Neher, Charles Kendall, *w, sp*, Chicago. A.B. (Manchester C.) '25.
- Neiman, Irwin Samuel, *sp*, Chicago.
- Nelson, Bertram Griffith, Jr., *a, w, sp*, Chicago. S.B. '31.
- Nieuwdorp, John, *s, a, w, sp*, Grand Rapids, Mich. A.B. (Calvin C.) '31.
- *Noonan, William Joseph, *a, w, sp*, Watertown, S.D. S.B. (U. of S. Dakota) '32.
- Olds, John Whitney, *s*, San Diego, Calif. S.B. (Rutgers U.) '30.
- Ostrander, Harold Raymond, *a, w, sp*, Spokane, Wash. S.B. (U. of Idaho) '31.
- Ovenu, Harold, *s*, Chicago. S.B. '30.
- Palmer, Alice Eugenia, *s, a, w, sp*, Chicago. S.B. '32.
- Palmer, Rex Bishop, *s, a, w, sp*, Seattle, Wash. S.B. (U. of Washington) '31.
- Palmquist, Emil Eugene, *a, w, sp*, Otisco, Minn. A.B. (Gustavus Adolphus C.) '30.
- Parratt, Louis Wardrop, *s, a, w, sp*, Salt Lake City, Utah. A.B. (U. of Utah) '32.
- Petkevich, Frank Michael, *a, w*, Chicago. S.B. '31.
- Pollack, Samuel, *sp*, Chicago.
- Pollack, Simon, *a, w, sp*, Brooklyn, N.Y. S.B. '31.
- Plain, George, *s*, Chicago. A.B. (U. of Illinois) '30.
- *Prohaska, John Van, *s, a, w, sp*, Chicago. S.B. '28.
- Post, John, *a, w, sp*, Chicago. S.B. '32.
- Post, Joseph, *a, w, sp*, Bronx, N.Y. S.B. (C. of City of N.Y.) '32.
- Quine, Robert Corkill, *s*, Croitville, Isle of Man, B.I. S.B. (Wheaton C.) '30.
- *Radford, Molly Hughes, *s, a, w, sp*, Chicago. S.B. '27.
- Rammelkamp, Charles Henry, *w, sp*, Jacksonville. Illinois College.
- Ranquist, Robert Charles, *s, w, sp*, Chicago. S.B. '31.
- Reaven, Albert, *a, w, sp*, Akron, Ohio. S.B. '32.
- Reiger, John Leslie, *a, w, sp*, Springfield. A.B. (U. of Illinois) '31.
- Reynolds, Louise, *s, w*, Madison, Wis. A.B. (U. of Wisconsin) '29.
- *Riskin, Alexander Michael, *s, a, w, sp*, Chicago. A.B. (U. of Calif.) '28.
- Roll, Lewis Robert, *s, a, w, sp*, Cutler, Ind. S.B. '31.
- *Rosati, Louis Michael, *a, w, sp*, New York, N.Y. S.B. (New York U.) '29.
- *Rosenblum, Arthur Harold, *s, a, w, sp*, Chicago. S.M. '32.
- *Rubenstein, Boris Benjamin, *s, w, sp*, Roxbury, Mass. A.M. (Harvard U.) '29.
- Rubovitz, Frank Emanuel, Jr., *s, a, w*, Chicago. S.B. '30.
- Ruch, Monroe Kuntz, *a, w, sp*, Chicago. A.B. (U. of S. Calif.) '32.
- *Safran, Nathaniel, *a, w, sp*, Brooklyn, N.Y. A.B. (U. of Michigan) '30.
- *Sammett, Joel Francis, *s, a*, Elmira, N.Y. A.B. (Cornell U.) '29.
- Sarnat, Bernard Goerge, *sp*, Chicago. S.B. '33.
- Saslavsky, Maurice, *a, w, sp*, Chelsea, Mass. S.B. (Tufts C.) '31.
- Sax, Milton Herbert, *a, w, sp*, Eveleth, Minn. A.B. (U. of Minnesota) '31.
- Schimmel, Walter August, *s, a, w, sp*, Chicago. A.B. (U. of Iowa) '26.
- Schneider, Harry Jacob, *s, a, w*, Long Branch, N.J. S.B. (Rutgers U.) '31.

- Schuitema, Donald Milo, *s, a, w, sp*, Grand Rapids, Mich. A.B. (Northwestern U.) '31.
- Schulak, Ben Harvey, *a, w, sp*, Toledo, Ohio. S.B. (Toledo U.) '32.
- *Schwarz, Milton Jandon, *a, w, sp*, Newark, N.J. S.B. (C. of City of N.Y.) '29.
- Schweiger, Lamont R., *a, w, sp*, Milwaukee, Wis. S.B. '32.
- Scott, Irvin H., *a, sp*, Sullivan, Ind. S.B. '32.
- Scudder, Lewis Rousseau, *a, w, sp*, Glastonbury, Conn. A.B. (Hope C.) '31.
- Shanedling, Philip Daniel, *sp*, Chicago.
- Sheedy, John Edward, *sp*, Worcester, Mass. A.B. (Catholic U.) '30.
- Shefts, Lawrence Milton, *a, w*, Okmulgee, Okla. S.B. (U. of Oklahoma) '30.
- *Sheldon, William Herbert, *s, a, sp*, Chicago. Ph.D. '26.
- Shuman, Clark Stebbins, *s, a, w*, Chicago. S.M. (Cornell U.) '29.
- Silber, Bernard, *a, w, sp*, Baltimore, Md. S.B. (U. of Maryland) '32.
- Sillman, Leonard Richard, *sp*, Chicago.
- Silver, Carol Mitchell, *a, w, sp*, Brooklyn, N.Y. S.B. (Columbia U.) '32.
- *Skinner, Lawrence Edward, *s, a, w, sp*, Chicago. A.B. (Oberlin C.) '30.
- Skubi, Kazimer B., *a, w, sp*, Seattle, Wash. S.B. (U. of Washington) '32.
- Slapion, Lawrence Gerson, *a, w, sp*, Brooklyn, N.Y. S.B. (William & Mary C.) '31.
- Slott, Irving, *sp*, Chicago. S.B. '31.
- Smith, Glen T., *a, w, sp*, Jerome, Idaho. S.B. (U. of Idaho) '32.
- Smith, Kendrick Adelbert, *sp*, Oak Park.
- Solberg, Lawrence Arthur, *a, w, sp*, Elk River, Idaho. S.B. (U. of Idaho) '29.
- Somma, Richard Edgard, *a, w, sp*, Chicago. S.B. '32.
- Spearing, John Henry, Jr., *sp*, Milwaukee, Wis.
- Specter, Israel Hayyim, *a, w, sp*, Chicago. S.B. (Lewis Inst.) '32.
- Stafford, Charles Arthur, *a, w, sp*, Kemmerer, Wyoming. A.B. (U. of Wyoming) '32.
- Sternfeld, Leon, *sp*, Chicago, S.B., '32.
- Stickney, James Minott, *s*, La Grange, Ph.B. '29.
- Stolfa, Laddie Lewis, *a, w, sp*, Berwyn.
- Stritar, Joseph, *a, sp*, Chicago. S.M. (Iowa State Agricultural C.) '31.
- Stroebel, Charles Frederick, *a, w, sp*, Lake Mills, Wis. A.B. (U. of Wisconsin) '31.
- Strohmeier, Otto Ernest, *s, a, w, sp*, Chicago. Ph.B. '23.
- Stubblebine, James Good, *a, w, sp*, Chicago.
- *Stuppy, George William, *s*, Chicago. Ph.D., '29.
- *Sullivan, Florance Leo, *s, a, w*, Freeport, S.B. '29.
- *Targow, Abram Morris, *sp*, Chicago. A.B. (U. of Michigan) '27.
- Tellman, Edwin Theodore, *a, w, sp*, Palmyra, N.Y. A.B. (Hope C.) '31.
- Templin, David Browning, *sp*, Gary, Ind.
- Tepper, Victor, *a, w, sp*, Asbury Park, N.J. A.B. (U. of Alabama) '32.
- *Thayer, Kent H. *s, a, w, sp*, Phoenix, Arizona, S.B. '31.
- Thomas, Elaine, *a, w, sp*, Jamestown, N.D. S.B. '32.
- Thompson, Estelle L., *a, w, sp*, Maplewood, N.J. A.M. (Cornell U.) '32.
- Thomson, Duncan MacLaren, *a, w, sp*, Chicago. S.B. '32.
- Troxell, Beryl Imogene, *a, w, sp*, Bellingham, Wash. S.M. '32.
- Tschetter, David J., *a, w, sp*, Emery, S.D. A.B. (Yankton C.) '30.
- *Tucker, William Boose, *a, w, sp*, Oberlin, Ohio. A.B. (Oberlin C.) '29.
- *Tucker, Winston Harris, *s, a, w, sp*, Chicago. Ph.D. '30.
- Urschel, Dan Lowell, *s, a, w, sp*, Tippecanoe, Ind. A.B. (Adrian C.) '31.

- Venema, Jay R., *a, w, sp*, Grand Rapids, Mich. A.B. (Calvin C.) '31.
 Vaughn, Leslie, Jr., *sp*, Emporia, Kans. S.B. (Washburn C.) '32.
 Vogel, Philip, *sp*, Chicago. S.B. '32.
 Vos, Bert John, Jr., *s, a, w, sp*, Bloomington, Ind. A.B. (U. of Indiana) '30.
 *Wadsworth, Morton Lyon, *a, w, sp*, Chicago. Ph.B. '29.
 Walsh, Edmund, *a, w, sp*, Morris. S.B. '31.
 Walvoord, Carl Anthony, *a, w, sp*, South Holland. A.B. (Hope C.) '32.
 Warrick, William Donald, *s, a, w*, Chicago. S.B. (Howard C.) '31.
 Wasserman, Louis Robert, *a, w, sp*, Cambridge, Mass. A.B. (Harvard C.) '31.
 Weary, Willard Bryan, *s*, Belvidere, Nebr. A.B. (Nebraska Wesleyan U.) '29.
 Weaver, Robert Greene, *a, w, sp*, Joliet.
 Weir, John Marshall, Jr., *a, w, sp*, Decatur.
 Weisberg, Seymour William, *a, w, sp*, Chicago. S.B. '32.
 *Wentz, Vida Broadbent, *s, a, w, sp*, Chicago. S.M. '27.
 Westra, Jacob John, Jr., *a*, Grand Rapids, Mich. A.B. (Calvin C.) '29.
 *Wilber, Gertrude Helen, *s, sp*, Port Huron, Mich. S.M. (Northwestern U.) '29.
 Wilcox, Robert Dorken, *s, a, w*, Rockford, S.B. '30.
 *Wilcoxon, George Mansell, *s, w, sp*, Alliance, Ohio. S.B. (Mt. Union C.) '27.
 Wiles, Isaiah Alonzo, *s*, Morgantown, W.Va. S.M. (West Virginia U.) '31.
 *Willett, Wendell Melvin, *s*, Des Moines, Iowa. A.B. (Drake U.) '28.
 Woerner, Arthur Charles, *sp*, Chicago. S.B. '32.
 *Woodbury, Robert Arthur, *s, a, w, sp*, Pittsburgh, Kans. Ph.D. (U. of Kansas) '31.
 Yohalem, Morton, *a, w, sp*, New York, N.Y. S.B. (New York U.) '31.
 Zabriskie, Charles Kenneth, *a, w, sp*, Norwich, Conn. S.B. (Wheaton C.) '32.

II. RUSH MEDICAL COLLEGE

A. JUNIORS

- Alfenito, Felix Salvatore, Jr., *a, w, sp*, Bronx, N.Y. A.B. (U. of Alabama) '31.
 Anderson, Harry Oscar, *a, w, sp*, Velva, N.D. A.B. (U. of North Dakota) '31; S.B. (*ibid.*) '32.
 Arthur, Barbara, *a, w, sp*, Orchard Park, N.Y. A.B. (Wellesley C.) '29.
 Arvin, Garland C., *a*, Blythedale, Mo. A.B. (U. of Missouri) '25; A.M. (*ibid.*) '28.
 Avallone, Louis Anthony, *a, w, sp*, New York City, N.Y. S.B. (C. of City of N.Y.) '30.
 Avner, David Leonard, *a*, Morgantown, W.Va. A.B. (U. of North Carolina) '31.
 Bank, Sam Wallace, *a*, Chicago. S.B. '30.
 Barlow, Orpheus William, *s*, A.B. (U. of Missouri) '20; A.M. (*ibid.*) '23; Ph.D. '26.
 Bartholomew, Raymond Kenneth, *a, w, sp*, Dayton, Ohio. A.B. (U. of Wisconsin) '32.
 Baugh, Richard Harold, *s, a, w*, Lafayette, Ind. S.B. (Purdue U.) '26; S.M. (Michigan State College) '28.
 Bennett, Arthur Lawrence, *a*, Appleton, Wis. A.B. (Lawrence C.) '27.
 Berchtold, Henry Francis, *a, w, sp*, Santa Fe, N.M. Ph.B. (Creighton U.) '26.
 Berger, Louis Mayer, *a, w*, Chicago. S.B. '30.
 Berger, Max Milton, *a, w*, Chicago. S.B. '30.
 Black, Charles Edward, *a*, Perry, Mich. S.B. (Michigan State C.) '30.
 Blatchford, Frank Wickes, *s, a*, Winnetka. A.B. (Harvard C.) '30.
 Boersma, John, *a, w, sp*, Chicago. S.B. '30.
 Boyd, Richard Fay, *sp*, Chicago. A.B. (U. of Illinois) '28.
 Boynton, Melbourne Wells, *s, a*, Chicago. Ph.B. '26.

- Brand, John Marcus, *s, a, w*, Morgantown, W.Va. S.B. (West Virginia U.) '32; A.B. (*ibid.*) '31.
- Breuhau, Herbert Charles, *a, w, sp*, Elmhurst. S.B. '29.
- Brown, Leo Ralph, *a, w*, East Chicago. S.B. '28.
- Buchanan, John Myles, *a, w*, Oak Park. S.B. '30.
- Burge, Edward Seymour, *a, w, sp*, Wilmette. A.B. (Dartmouth C.) '31.
- Burns, Gordon Taylor, *a, sp*, Berwyn. S.B. '30.
- Bussey, Charles Dan, *a, w*, Timpson, Tex. A.B. (Baylor U.) '30.
- Cant, John Francis, *a, w, sp*, Westfield, Wis. A.B. (U. of Wisconsin) '32.
- Carbone, Joseph Alfred, *a, w, sp*, New York City, N.Y. S.B. (New York U.) '30.
- Cashmore, William, *sp*, Dillon, Mont. S.B. (Montana State C.) '28.
- Castator, Floyd Wilson, *a, w, sp*, South Whitley, Ind. A.B. (U. of Alabama) '32.
- Chiavetta, John, *s, a, w*, Pittsburgh, Pa. A.B. (West Virginia U.) '30; S.B. (*ibid.*) '32.
- Clark, LeMon, *s*, Ithaca, N.Y. Ph.D. (Cornell C.) '20.
- Clark, John H., *a, w, sp*, Moab, Utah. A.B. (U. of Utah) '31.
- Cloward, Ralph Bingham, *a, w, sp*, Salt Lake City, Utah. S.B. (U. of Utah) '30.
- Cohen, Marshall, *sp*, Chicago. S.B. '31.
- Curtis, William Long, *a, w, sp*, Seattle, Wash. S.B. (U. of Washington) '30.
- DePree, Leon Earl, *a, w, sp*, Zeeland, Mich. A.B. (Hope College) '29.
- Devereux, John William, *s, a*, Honolulu, T.H. A.B. (Stanford U.) '30.
- Dickerman, Henry Street, Jr., *a, w, sp*, Springfield, Ill. S.B. (Princeton U.) '30.
- Dina, Salvatore, *s*, Chicago. S.B. '30.
- Dobbs, Frederick Henry, *a, w, sp*, Wheeling, W.Va. A.B. (West Virginia U.) '31; S.B. (*ibid.*) '32.
- Dueker, Howard William, *a, w, sp*, Kansas City, Mo. S.B. (U. of Missouri) '32.
- Dykhuizen, Harold Daniel, *a, w, sp*, Holland, Mich. A.B. (Hope C.) '30.
- Ehrlich, Joseph Charles, *a, w, sp*, Chicago. S.B. (Northwestern U.) '30.
- Eliscu, Juliette Melanie, *a, w, sp*, St. Joseph, Mo. S.B. '31.
- Elliott, William E., *a, w, sp*, Chicago. A.B. (Ohio Wesleyan U.) '26.
- Evans, Elwyn, *a*, Chicago. S.B. (Lewis Inst.) '27.
- Ewald, William, *sp*, Chicago. S.B. (U. of Illinois) '31.
- Farrington, Joseph Davis, *a, w, sp*, Chicago. A.B. (Howard C.) '29.
- Feinberg, Louis, *s, a*, Chicago. S.B. '30.
- Fisher, Cloyde Reber, *a*, Chicago. S.B. (Butler U.) '31.
- Fitts, Ralph Lamar, *s, a, w, sp*, Atlanta, Ga. S.B. (U. of Georgia) '22; M.A. (Columbia U.) '27.
- Foster, Robert Henry King, *s*, Cleveland, O. B.C.E. (Ohio State U.) '23; Ph.D. '32.
- Fradkin, Nathan Frederick, *a, w*, Roxbury, Mass. A.B. (Harvard C.) '29.
- Frank, William Paul, *a, w, sp*, Chicago. S.B. '29.
- Frankel, Charles James, *a, w, sp*, Huntington, W.Va. S.B. (Lafayette C.) '29.
- Freedberg, Abraham Stone, *a, w, sp*, Salem, Mass. A.B. (Harvard C.) '29.
- Freedberg, Alan Phillips, *a, w, sp*, Salem, Mass. S.B. (Boston U.) '30.
- Freriks, Dick Jacob, *a, w, sp*, Kalamazoo, Mich. A.B. (Calvin C.) '29.
- Fretz, John Lewis, *s*, Tacoma, Wash. S.B. (C. of Puget Sound) '29.
- Friedman, Elmer Arthur, *s, a*, Chicago. S.B. '30.
- Frye, Garnett Milton, *a, w, sp*, Christiansburg, Ky. A.B. (U. of Kentucky) '29.
- Goldman, Benjamin, *a, w, sp*, New York City, N.Y. S.B. (New York U.) '29.
- Goldman, Milton J. M., *s*, Sturgeon Bay, Wis. S.B. (U. of Wisconsin) '25.

- Goorwitch, Joseph, *a, w, sp*, Brooklyn, N.Y. A.B. (U. of Alabama) '30.
- Gorenflo, Leila Ann, *a, w, sp*, Cass Lake, Minn. A.B. (U. of North Dakota) '31; S.B. (*ibid.*) '32.
- Grauman, Samuel, *sp*, Milwaukee, Wis. S.B. (Yale U.) '31.
- Green, Marion Fielding, *s, a, w*, Lubbock, Tex. A.B. (Texas Technology C.) '28.
- Grider, James Allen, *a, w, sp*, Lexington, Ky. A.B. (U. of Kentucky) '30.
- Grimes, Manning Elmore, *a, w, sp*, Slater, Mo. A.B. (U. of Missouri) '31.
- Grisamore, Thomas L., *sp*, Wilmette. A.B. (Colgate U.) '31.
- Gustafson, Carl August, *s*, Virginia. S.B. (Illinois C.) '16.
- Hall, Durward Gorham, *a, w, sp*, Springfield, Mo. A.B. (Drury C.) '30.
- Hamilton, G. Robert, *s*, Fayetteville, Ark. A.B. (Hendrix C.) '29.
- Hanson, Karl Bayles, *a, w, sp*, Jacksonville, Fla. A.B. (U. of South Dakota) '30; S.B. (*ibid.*) '32.
- Harris, Robert Henry, *a, w, sp*, Cando, N.D. A.B. (Stanford U.) '28; S.B. (U. of North Dakota) '32.
- Hatlelid, Frank Hall, *a, w, sp*, Grafton, N.D. A.B. (U. of North Dakota) '30; S.B. (*ibid.*) '32.
- Hausmann, Edwin George, *a, w*, Hillsboro, N.D. A.B. (U. of North Dakota) '31; S.B. (*ibid.*) '32.
- Heersma, Harris Sidney, *a, w, sp*, Oak Lawn. A.B. (Hope C.) '30.
- Heller, Hyman, *a, w*, Willimantic, Conn. Ph.B. (Brown U.) '29.
- Heller, Richard Elliott, *s, a*, Chicago. S.B. '29.
- Holmberg Conrad Joel, *a, w, sp*, Ortonville, Minn. A.B. (Gustavus Adolphus C.) '26; S.B. (U. of North Dakota) '33.
- Hulla Grover, *a, w, sp*, Chicago. S.B. '30.
- Isenhardt, George Boyd, *a, w*, Wenatchee, Wash. S.B. (U. of Washington) '29.
- Jacobson, Ferdinand Carl, *a, w, sp*, Wittenberg. Wis. A.B. (Luther C.) '30.
- Jamison, Frank Robert, *a, w, sp*, Fairmont, W.Va. A.B. (West Virginia U.) '24; S.B. (*ibid.*) '32.
- Janson, Carl Herbert, *a, w, sp*, Blue Island. S.B. '30.
- Johnson, Roy Liddell, *a, w, sp*, Atlanta, Ga. A.B. (U. of Alabama) '30; S.B. (*ibid.*) '32.
- Kana, Matsukichi, *a, w, sp*, Kilauea. T.H. S.B. (Northwestern U.) '29.
- Kennedy, Richard Loren, *a, w, sp*, West Lafayette, Ind. S.B. (Purdue U.) '28.
- Kermott, Louis Henry, *a, w, sp*, Minot, N.D. A.B. (U. of North Dakota) '30.
- Kesler, Roland Lincoln, *a, w, sp*, Salisbury, N.C. A.B. (U. of North Carolina) '29.
- Kim, Naomi, *sp*, Seoul, Korea. S.B. (Wheaton C.) '30.
- King, Irving Joseph, *s, a*, Chicago. S.B. '30.
- Klocker, Karl James, *s*, Chicago. S.B. (Lewis Inst.) '29.
- Knox, Roland F., *sp*, Iowa Park, Tex. S.B. (Texas A. and M. C.) '26.
- Kohlstedt, Kenneth, Delor, *a, w, sp*, Evanston. Ph.B. '26; A.M. (Northwestern U.) '27.
- Kohn, Kate Hirschberg, *a, w, sp*, Chicago. A.B. (Bryn Mawr C.) '30.
- Kopcha, Joseph Edwards, *a, w, sp*, Whiting, Ind. S.B. (U. of Chattanooga) '29.
- Krogstad, Lorange Tracey, *a, w, sp*, Harvey. N.D. A.B. (U. of North Dakota) '31; S.B. (*ibid.*) '32.
- Lambertus, Paul Theodore, *a, w, sp*, Parkston, S.D. S.B. (U. of South Dakota) '32.
- Lanning, Nicholas, *a, w, sp*, Zeeland, Mich. A.B. (Hope C.) '30.
- Lewis, Will, *s, a*, Pueblo, Colo. S.B. (U. of Southern California) '30.
- Lewy, Robert Barnard, *a, w*, Chicago. S.B. '30.

- Looby, William Edward, *a, w, sp*, Nunda, S.D. S.B. (U. of South Dakota) '32.
- Martin, Albert Gould, *a, w, sp*, Franklin, Mass. A.B. (Dartmouth C.) '31.
- Meengs, Marvin Bogend, *a, w, sp*, Holland, Mich. A.B. (Hope C.) '30.
- Megna, Jerome Anthony, *a, w, sp*, Milwaukee, Wis. S.B. (Harvard U.) '30.
- Meitin, Ruth, *a, w*, Orlando, Fla. A.B. (Florida State C.) '30.
- Michelstein, Israel, *s*, New York City, N.Y. S.B. (C. of City of N.Y.) '28; S.B. '30.
- Miessner, Alfred Dietrich, *a, w*, Cleveland, Ohio. A.B. (Western Reserve U.) '28.
- Moberg, Clarence William, *s, a, w*, Napoleon, N.D. A.B. (U. of North Dakota) '29; S.B. (*ibid.*) '30.
- Montgomery, Wilder Percival, *a, w, sp*, Washington, D.C. A.B. (Dartmouth C.) '31.
- Moody, Leonard Wood, *s*, Muskogee, Okla. S.B. (Lafayette C.) '28.
- Munk, Ivan, *sp*, Brimfield, Ind. A.B. (DePauw U.) '31.
- Murphy, Edward S., *sp*, Dixon. S.B. (U. of Notre Dame.) '31.
- Namminga, Sam Edward, *a, w, sp*, Dante, S.D. S.B. (Huron C.) '30; S.B. (U. of South Dakota) '30.
- Nason, Robert Allen, *a, w, sp*, Madison, Wis. A.B. (Ripon C.) '30.
- Nau, Carl August, *s, a*, Galveston, Tex. A.B. (U. of Texas) '23; A.M. (*ibid.*) '24.
- Neher, Charles Kendall, *s, a*, Dayton, Ohio. A.B. (Manchester C.) '25.
- Nykamp, Russel Raymond, *a, w, sp*, Zeeland, Mich. A.B. (Hope C.) '26.
- O'Halloran, James John, *a, w*, Chicago. A.B. (U. of Iowa) '30.
- Olsen, Arthur Martin, *s, a*, Des Moines, Iowa. A.B. (Dartmouth C.) '30.
- Olwin, John Hurst, *a, w, sp*, Robinson. A.B. (U. of Illinois) '29.
- Ovenu, Harold, *s, a, w*, Chicago. S.B. '30.
- Pagano, Pasquale, *a, w, sp*, Bronx, N.Y. S.B. (New York U.) '30.
- Papp, Sandor, *sp*, Brooklyn, N.Y., A.B., (U. of Alabama) '30.
- Perkins, Robert Donald, *a, w, sp*, Oshkosh, Wis. S.B. (U. of Wisconsin) '32.
- Perley, Abraham Israel, *a, w, sp*, Brooklyn, N.Y. A.B. (U. of Alabama) '30.
- Plain, George, *a, w, sp*, Aurora. A.B. (U. of Illinois) '30.
- Potter, Douglas Laten, *a, w, sp*, West Palm Beach, Fla. A.B. (U. of North Carolina) '30.
- Putnam, George Hamlin, *s*, Birmingham, Ala. S.B. (Howard C.) '29.
- Quaife, Laurence Woodridge, *a, w, sp*, Rosalia, Wash. S.B. (Washington State C.) '30.
- Quine, Robert Corkill, *a, w*, Greeba, Isle of Man, British Isles. S.B. (Wheaton C.) '30.
- Reeve, Jane, *a, w, sp*, Salt Lake City, Utah. A.B. (Mills C.) '29; A.M. (U. of Utah) '30.
- Reynolds, Eleanor Louise, *a, w, sp*, Madison, Wis. A.B. (U. of Wisconsin) '29.
- Rogers, Albert Francis, *a, w, sp*, Milwaukee, Wis. A.B. (Yale U.) '30.
- Rosengreen, George Ernest, *a, w, sp*, Logan, Utah. S.B. (Utah State Agr. C.) '28.
- Rubenstein, Morris William, *s, a*, Chicago. S.B. '30.
- Rubovitz, Frank, *sp*, Chicago. S.B. '30.
- Running, E. Henry, *a, w, sp*, Sioux City, Iowa. A.B. (Morningside C.) '30; S.B. (U. of South Dakota) '32.
- Rushton, Joseph George, *s, a, w*, Red Oak, Iowa. A.B. (Dartmouth C.) '31.
- Sandifer, Fred Monore, *a, w, sp*, Greenwood, Miss. A.B. (U. of Mississippi) '30.
- Sazama, Frank Bernard, *a, w, sp*, Colby, Wis. S.B. (U. of Wisconsin) '29; M.S. (*ibid.*) '30.
- Schneider, Harry Jacob, *sp*, Long Branch, N.J. S.B. (Rutgers U.) '31.
- Schneider, Maurice, *a, w, sp*, Chicago. S.B. '31.
- Schneider, Max, *a, w, sp*, Long Branch, N.J. S.B. (Rutgers U.) '30.

- Schulze, Hartwin Adolph, *a, w*, Albany, N.Y. S.B. '29.
 Schumaker, Eugene, *s, a*, Terre Haute, Ind. Sc.D. (Johns Hopkins C.) '30.
 Schwartz, Walter Fredrick, *a, w, sp*, Bruce, S.D. S.B. (U. of South Dakota) '32; A.B. (*ibid.*) '33.
 Segal, Jack, *a, w, sp*, Chicago. S.B. (Lewis Institute) '30.
 Sellman, Adolph Henry, *s, a, w, sp*, Bronx, N.Y. A.B. (U. of Alabama) '29.
 Sesit, Myron Frank, *a, w, sp*, Columbia, Mo. A.B. (Columbia U.) '27; S.B. (U. of Missouri) '32.
 Shefts, Lawrence, *sp*, Okmulgee, Okla. S.B. '30.
 Shuman, Clark Stebbins, *sp*, Buenos Aires, Argentina. A.B. (Oberlin C.) '28; S.M. (Cornell U.) '29.
 Siebers, Bernadine, *a, w, sp*, Grand Rapids, Mich. A.B. (Hope C.) '30.
 Slott, Irving, *a, w, sp*, Chicago. S.B. '31.
 Smith, Lucian Anderson, *a, w, sp*, Mayfield, Ky. A.B. (Wabash C.) '30.
 Staton, Younger Alexander, *a, w, sp*, Lexington, Ky.
 Stoen, Harold Jennings, *a, w, sp*, Milan, Minn. S.B. (U. of North Dakota) '32.
 Talbott, Ralph E., *s, sp*, Philippi, W.Va. S.B. (West Virginia U.) '30.
 Tancredi, Chester, *a, w, sp*, Birmingham, Ala.
 Taylor, Thaddeus, Warsaw, *a, w, sp*, Toledo, Ohio. A.B. (Kenyon C.) '29.
 Taylor, William Edward, *a, sp*, Springfield, Mo. A.B. (State Teachers C.) '30.
 Treharne, Frank Edwin, *a, w, sp*, Dagus Mines, Pa. A.B. (Park C.) '30.
 Tucker, Jerome Harold, *s*, Chicago. S.B. '30.
 Tyse, Eva Rachel, *a, w, sp*, Holland, Mich. A.B. (Hope C.) '29.
 Underwood, Johnson, Jr., *a, w, sp*, Parkville, Mo. A.B. (Park C.) '30.
 Valentine, Howard Vincent, *a, w, sp*, Spokane, Wash. S.B. (Loyola U.) '31; M.S. (*ibid.*) '32.
 Warrick, William, *sp*, Birmingham, Ala. S.B. (Howard C.) '31.
 Washburn, Richard Nathaniel, *a, w, sp*, Rensselaer, Ind. S.B., '30.
 Watson, Leslie Cuthbert, *a, w, sp*, Long Beach, Calif. A.B. (U. of North Dakota) '31; S.B. (*ibid.*) '32.
 Weisfeldt, Louis Armand, *a, w, sp*, Milwaukee, Wis. S.B. (U. of Wisconsin) '32.
 Weiss, Andor Alvin, *a, w, sp*, Yonkers, N.Y. S.B. (C. of City of New York) '30.
 Wellens, Stanley Lewis, *a, w, sp*, Brooklyn, New York. A.B. (U. of Alabama) '30.
 Welles, Marshall Philip, *a, w, sp*, Pasadena, Calif. S.B. (Oregon State C.) '30.
 Westphal, Robert Sturgeon, *a, w, sp*, Reading, Pa. A.B. (C. of Wooster) '30.
 Wilcox, Robert, *sp*, Rockford. S.B. '30.
 Winter, John Kools, *a, w, sp*, Holland, Mich. A.B. (Hope C.) '30.
 Winter, William Garrett, *a, w, sp*, Holland, Mich. A.B. (U. of Michigan) '30.
 Wolters, Simon Lloyd, *a, w, sp*, Grand Rapids, Mich. A.B. (Calvin C.) '30.
 Worthen, Samuel Henry, Jr., *a, w, sp*, Salt Lake City, Utah. A.B. (U. of Utah) '30.

B. SENIORS

- Accardi, Vincent, *s, a, w, sp*, Brooklyn, N.Y. A.B. (St. John's College) '27; S. M. (*ibid.*) '28.
 Albus, William Reuben, *s*, Catawissa, Pa. S.B. (Pennsylvania State C.) '17.
 Anderson, Andrew Russell, *s, a, w*, Rockford. A.B. (U. of Wisconsin) '29.
 Anderson, John Leonard, *a, w, sp*, Erwin, S.D. A.B. (Gustavus Adolphus C.) '29.
 Appelman, David Hillard, *a, w, sp*, Brooklyn, N.Y. S.B. (New York U.) '29.
 Arvin, Garland C., *w, sp*, Blythedale, Mo. A.B. (U. of Missouri) '25; A.M. (*ibid.*) '28.

- Barlin, Harry, *a, w, sp*, Bronx, N. Y. A.M. (Columbia U.) '29.
- Barwasser, Norbert Clement, *s, a, w, sp*, Chicago. A.B. (U. of Wisconsin) '27; A.M. (*ibid.*) '31.
- Bassler, Claude Benedict, *s, a, w, sp*, Dubuque, Iowa. A.B. (Columbia C.) '29.
- Bates, Richard Lee, *a, w, sp*, Meadville, Pa. S.B. (Allegheny C.) '28; S.B. (U. of West Virginia) '31.
- Beil, Martin Clemens, *a, w, sp*, Watertown, S.D. A.B. (U. of South Dakota) '29; S.B. (*ibid.*) '31.
- Bergholz, Eugene Adolf, *s, a, w*, Wauwatosa, Wis. S.B. (U. of Wisconsin) '25.
- Blankstein, Samuel, S., *s, a, w*, Milwaukee, Wis. A.B. (U. of Wisconsin) '30; A.M. (*ibid.*) '31.
- Blatchford, Frank Wickes, Jr. *w, sp*, Winnetka. A.B. (Harvard C.) '30.
- Blum, Bernard Michael, *s, a, w*, Los Angeles, Calif. A.B. (Columbia U.) '29.
- Bockoven, Harold DeCou, *s, a, w*, Plymouth, Ind. A.B. (DePauw U.) '29.
- Bradshaw, Virgil Marlow, *s, a, w*, Lake Jovita, Fla. S.B. (U. of Florida) '23; S.M. (St Louis U.) '30.
- Bourns, Edward Gordon, *a, w, sp*, Fort Wayne, Ind. S.B. (Wooster C.) '29.
- Boynton, Melbourne Wells, *w, sp*, Chicago. Ph.B. '26.
- Butcher, Thomas Peck, *s, a, w*, Emporia, Kan. Ph.B. '26.
- Baugh, Richard Harold, *sp*, Lafayette, Ind. S.B. (Purdue U.) '26; M.S. (Michigan State College) '28.
- Berger, Louis Mayer, *sp*, Chicago. S.B. '30.
- Berger, Max Milton, *sp*, Chicago. S.B. '30.
- Brand, John Marcus, *sp*, Morgantown, W.Va. S.B. (West Virginia U.) '32; A.B. (*ibid.*) '31.
- Brown, Leo Ralph, *sp*, East Chicago. S.B. '28.
- Buchanan, John Myles, *sp*, Oak Park. S.B. '30.
- Bussey, Charles Dan, *sp*, Timpson, Tex. A.B. (Baylor U.) '30.
- Campbell, Rundle Donald, Jr., *a, w, sp*, Youngstown, Ohio. A.B. (Ohio Wesleyan U.) '29.
- Cannon, George Dows, *a*, Jersey City, N.J. A.B. (Lincoln U.) '24.
- Cantwell, Thomas Olin, *s, a, w, sp*, Chicago. A.B. (Cornell C.) '20.
- Chiavetta, John, *sp*, Pittsburgh, Pa. A.B. (West Virginia U.) '30; S.B. (*ibid.*) '32.
- Childs, Alice, *s*, Waxahachie, Tex. S.B. (Trinity U.) '24.
- Ching, Renald P., *s, a, w*, China. S.B. '30.
- Clark, Percy LeMon, *a, w, sp*, Ithaca, N.Y. Ph.D. (Cornell C.) '29.
- Cohen, George Charles, *a, w, sp*, Chicago. S.B. '28.
- Cohen, Louis, *s, a, w*, Passaic, N.J. A.B. (Harvard U.) '29; A.M. (U. of Alabama) '31.
- Cole, William Leon, *s, a, w*, Tahlequah, Okla. S.B. (Northeastern State Teachers' C.) '29.
- Copleman, Hyman Benjamin, *a, w, sp*, New Brunswick, N.J. S.B. (Rutgers U.) '29.
- Crawford, Ray Forest, *s, a, w*, Powell, Wyo. S.B. '29.
- Cremer, John Alfred, *s, a, w*, Grand Rapids, Mich. A.B. (Calvin C.) '28.
- Cushman, Joseph Brilling, *s, a, w*, Princeton, Ind. A.B. (DePauw U.) '27.
- DePinto, Angus Jacques, *s, a, w*, Chicago. S.B. '29.
- DePonceau, Leonard, *s, a*, Brockway, Pa. S.B. (U. of Pittsburgh) '27.
- Devereux, John William, *w, sp*, Honolulu, T.H. A.B. (Stanford U.) '30.
- Dina, Salvatore, Jr., *a, w, sp*, Chicago. S.B. '30.

- Dunham, Charles Little, *a, w, sp*, Evanston. A.B. (Yale U.) '29.
- Ells, Elizabeth Sherman, *s, a, w*, Milwaukee, Wis. A.B. (Smith C.) '24.
- Evans, Elwyn, *w, sp*, Chicago. S.B. (Lewis Inst.) '27.
- Fairchild, Robert Durkee, *s, a, w*, Rutland, Vt. A.B. (Dartmouth C.) '29.
- Feinberg, Louis, *w, sp*, Chicago. S.B. '30.
- Feldman, Samuel Leonard, *a, w, sp*, Spring Valley, N.Y. S.B. (Alfred U.) '29.
- Finley, George William, *a, w, sp*, Fontana, Wis. A.B. (U. of Wisconsin) '25.
- Fitzmaurice, Harry Andrew, *s, a, w, sp*, Chicago. S.B. (Loyola U.) '30; S.M. (*ibid.*) '31.
- Fleming, Arthur William, *w, sp*, Chicago. S.B. (U. of Notre Dame) '29.
- Fradkin, Nathan Frederick, *sp*, Roxbury, Mass. A.B. (Harvard C.) '29.
- Frank, Albert Abraham, *a, w, sp*, Malden, Mass. A.B. (Harvard C.) '29.
- Fretz, John Lewis, *a, w, sp*, Tacoma, Wash. S.B. (C. of Puget Sound) '29.
- Friedberg, Stanton Abeles, *s, a, w*, Chicago. A.B. (Dartmouth C.) '29.
- Friedman, Elmer Arthur, *w, sp*, Chicago. S.B. '30.
- Fry, Orvin Philip, *a, w, sp*, Benicia, Calif. A.B. (Stanford U.) '28.
- Fulton, Stewart, *a, w, sp*, Rockford. A.B. (Beloit C.) '28.
- Garrard, Hollis Franklin, *a, w, sp*, Birmingham, Ala. A.B. (Howard C.) '29.
- Gatewood, Mary Christine, *a, w, sp*, McConnelsville, Ohio. A.B. (Ohio State U.) '28; M.A. '29.
- Gilbertsen, Cecil Reinhart, *s*, Glenburn, N.D. A.B. (Jamestown, C.) '26; S.B. (U. of North Dakota) '30.
- Golden, Maurice, Joe, *a, w, sp*, Chicago. S.B. (Northwestern U.) '29.
- Goldman, Max Davis, *s, a, w*, Brooklyn, N.Y. A.B. (U. of Alabama) '29.
- Goldman, Milton J. M., *a, w*, Milwaukee, Wis. S.B. (U. of Wis.) '25.
- Gordon, Vida Hildreth, *a, w, sp*, Rowley, Mass. A.B. (Smith C.) '28.
- Goss, Henry Clay, *sp*, Centerville, Iowa. S.B. '29.
- Goss, Martha Danielson, *sp*, Litchfield, Minn. A.B. (Carleton C.) '28.
- Green, Marion Fielding, *sp*, Lubbock, Tex. A.B. (Texas Technology C.) '28.
- Grimson, Keith Sanford, *a, w, sp*, Rugby, N.D. A.B. (U. of North Dakota) '30; S.B. (*ibid.*) '31.
- Gsell, George Franklin, *s, a, w*, Wichita, Kan. A.B. (U. of Kansas) '29.
- Gustafson, Carl Arthur, *a, w, sp*, Virginia. S.B. (Illinois C.) '16.
- Halmos, John William, *a, w, sp*, Chicago. S.B. '30.
- Hamilton, G. Robert, *a, w, sp*, Fayetteville, Ark. A.B. (Hendrix C.) '29.
- Hansen, Joseph LaReno, *s, a, w*, Salt Lake City, Utah. A.B. (U. of Utah) '29.
- Hart, Benjamin Franklin, *s, a, w*, Burning Springs, Ky. A.B. (Eastern Kentucky State Teachers' C.) '25.
- Hartman, Moses, *s*, Cleveland, Ohio. A.B. (Western Reserve U.) '27; A.M. (U. of Michigan) '28.
- Hatleberg, Earl J., *s, a, w, sp*, Madison, Wis. A.B. (U. of Wisconsin) '31.
- Hayashi, Chisato, *s, a, w*, Honolulu, T.H. A.B. (U. of Hawaii) '25.
- Helferty, John Kenneth, *a, w, sp*, Fargo, N.D. S.B. (North Dakota Agricultural C.) '29.
- Heller, Hyman, *sp*, Willimantic, Conn. Ph.B. (Brown U.) '29.
- Heller, Richard Elliot, *w, sp*, Chicago. S.B. '29.
- Helpern, Herman Goodman, *a, w, sp*, New York City, N.Y. S.B. (C. of City of N.Y.) '29.
- Hemming, Philip Clifford, *a, w, sp*, Elgin. S.B. (U. of Notre Dame) '29.
- Hinrichs, Marie, *s, a, w*, Chicago. A.B. (Lake Forest C.) '17; Ph.D. '23.
- Hoekzema, Jack, *s, a, w*, Grand Rapids, Mich. A.B. (Calvin C.) '29.

- Hohman, Kurt Edward, *a, w*, Chicago. S.B. '29.
- Holt, Helen, *s, a, w*, Chicago. A.B. (Northwestern U.) '22.
- Huston, Francis Wyatt, *s, a, w*, Blanchard, Iowa. S.B. (Tarkio C.) '29.
- Ihrke, Irvin Arthur, *a, w*, Omro, Wis. S.B. '30.
- Isenhardt, George Boyd, *sp*, Wenatchee, Wash. S.B. (U. of Washington) '29.
- Jenkins, David Meredith, *s, a, w*, El Paso. S.B. (Illinois Wesleyan C.) '29.
- Jermstad, Robert Odin, *a, w*, Superior, Wis. A.B. (St. Olaf C.) '29; S.B. (U. of South Dakota) '31.
- Kardon, Milton Morton, *a, w*, Brooklyn, N.Y. A.B. (U. of Alabama) '30.
- Katz, Harry, *a, w, sp*, Pawtucket, R.I. A.B. (U. of Michigan) '29.
- Keinigsberg, Aaron, *s, a, w*, Chicago. S.B. '28.
- Keith, John Johnston, *s*, Eau Claire, Wis. A.B. (Amherst C.) '28.
- King, Irving Joseph, *w, sp*, Chicago. Ph.B. '30.
- Kirmse, Thomas William, *s, a, w, sp*, Marinette, Wis. A.B. (U. of Wisconsin) '30; A.M. (*ibid.*) '31.
- Kistin, Albert David, *a, w*, New York City, N.Y. A.B. (Cornell U.) '27; A.M. (Columbia) '28.
- Klocker, Karl James, *a, w, sp*, Chicago. S.B. (Lewis Inst.) '29.
- Koransky, Abraham Ralph, *w*, LaFayette, Ind. S.B. (Purdue U.) '28.
- Laemle, Robert Mayer, *a, w, sp*, Marshfield, Wis. A.B. (U. of Wisconsin) '30.
- Laird, Don Roth, *a, w, sp*, Malvern, Iowa. A.B. (Grinnell C.) '28.
- Lantiere, Salvator Robert, *s, a, w*, Chicago. A.B. (Cornell U.) '29.
- Leff, Charles Irving, *a, w, sp*, Western Springs. S.B. (Beloit C.) '29.
- Leibenson, Samuel, *s, a, w, sp*, Oshkosh, Wis. A.B. (U. of Wisconsin) '30.
- Leimbacher, Earl Smith, *w, sp*, Joliet. A.B. (U. of Illinois) '29.
- Lewis, Will, *w, sp*, Pueblo, Colo. S.B. (U. of Southern California) '30.
- Lewy, Robert Barnard, *sp*, Chicago. S.B. '30.
- Leyers, Rudolph P., *a*, Chicago. S.B. '29.
- Lindquist, John Lockwood, *s, a, w*, Chicago. S.B. '29.
- Lisse, Reuben Rush, *s, a, w*, Chicago. S.B. '29.
- Lookanoff, Victor Alexander, *w, sp*, Warrensburg, Mo. S.B. (Central Missouri State Teachers C.) '27; S.B. (U. of Missouri) '30.
- Marganoff, Harry, *a, w, sp*, Patchogue, L.I., N.Y. A.B. (U. of Alabama) '29; S.B. (*ibid.*) '31.
- Mark, Morton Field, *a, w, sp*, Wilmington, Del. A.B. (U. of Delaware) '28.
- McAllister, Ralph Graham, *s*, Waterman. S.B. (Monmouth C.) '26.
- McCormick, Loyd John, *a, w, sp*, Carthage. A.B. (Carthage C.) '25.
- McKirdie, Matthew, *a, w, sp*, Chicago. S.B. '29.
- Meitin, Ruth, *sp*, Orlando, Fla. A.B. (Florida State C.) '30.
- Meltzer, Abe M., *sp*, Bronx, N.Y. A.B. (U. of Alabama) '31; S.B. (*ibid.*) '31.
- Merrick, Alton Joyce, *s, a, w*, Shelby, Neb. A.B. (Nebraska Wesleyan U.) '29.
- Merricks, James Wesley, Jr., *s, a, w, sp*, Charleston, W.Va. A.B. (West Virginia U.) '30.
- Metcalfe, Cecil John, *s, a, w*, Dodgeville, Wis. S.B. (U. of Wisconsin) '29.
- Mi, Ching Hsien, *s, a, w, sp*, Ting Chow, Hopei Province, China. S.B. '30.
- Miessner, Alfred Dietrich, *sp*, Cleveland, Ohio. A.B. (Western Reserve U.) '28.
- Miller, Ernest Blair, *s, a, w*, Jones Mills, Pa. S.B. (Ashland C.) '28; S.B. (West Virginia U.) '31.
- Moberg, Clarence William, *sp*, Napoleon, N.D. A.B. (U. of North Dakota) '29; S.B. (*ibid.*) '30.

- Monroe, Clarence Webster, *s*, Edwardsville. S.B. (Whitman C.) '28.
- Moody, Leonard Wood, *a, w, sp*, Muskogee, Okla. S.B. (Lafayette C.) '28.
- Morgan, Marion Mona, *a, w, sp*, Winnipeg, Canada. S.B. (U. of Manitoba) '28.
- Mueller, George Robert, *s, a, w, sp*, Chicago. S.B. '29.
- Musacchio, Frederick Alfred, *a, w, sp*, Elizabeth, N.J. S.B. (Rutgers U.) '29.
- Najjar, Constantine Conrad, *a, w, sp*, Brooklyn, N.Y. A.B. (U. of Alabama) '29.
- Nau, Carl August, *w, sp*, Galveston, Tex. A.B. (U. of Texas) '23; A.M. (*ibid.*) '24.
- Neckermann, Edwin Frank, *a, w*, Chicago. S.B. '29.
- Nelson, Kenneth Rider, *a, w, sp*, Des Moines, Iowa. A.B. (Drake U.) '28.
- Newman, Louis Benjamin, *s*, Chicago. S.B. (Armour Inst. of Technology) '21.
- O'Brien, Ruth Monica, *s, a, w*, Chicago. S.B. '29.
- O'Halloran, James John, *sp*, Chicago. A.B. (U. of Iowa) '30.
- Oldroyd, Merrill Lee, *s, a, w*, Fountain Green, Utah. A.B. (U. of Utah) '30.
- Olsen, Arthur Martin, *w, sp*, Des Moines, Iowa. A.B. (Dartmouth C.) '30.
- Orr, August, *a, w, sp*, Jamestown, N.D. A.B. (Jamestown C.) '27; S.B. (U. of North Dakota) '31.
- Ottum, Alvin Emmett, *a, w, sp*, Aberdeen, S.D. S.B. (U. of South Dakota) '31.
- Ovenu, Harold, *sp*, Chicago. S.B. '30.
- Ozanne, Bryce Kenneth, *s, a, w*, Neenah, Wis. A.B. (Lawrence C.) '29.
- Peabody, Percy Dickinson, Jr., *a, w, sp*, Webster, S.D. A.B. (U. of South Dakota) '27; S.B. (*ibid.*) '31.
- Peacock, Albert Upham, *s, a, w*, Glen Ridge, N.J. A.B. (Colby C.) '27.
- Perman, Abraham Harold, *a, w, sp*, New York City, N.Y. A.B. (U. of Alabama) '28.
- Phelps, McKinnie Lee, *s, a, w*, Monmouth. S.B. (Monmouth C.) '29.
- Phillips, Robert Willard Wilson, *s, a, w*, Kingwood, W.Va. S.B. (West Virginia Wesleyan C.) '29; S.B. (West Virginia U.) '31.
- Poppens, Henry Hije, *a, w*, Tea, S.D. S.B. '29.
- Posey, Alice Margaret, *w*, Chicago. A.B. (Kansas University) '27; S.M. (*ibid.*) '28.
- Putnam, George Hamlin, *a, w*, Birmingham, Ala. S.B. (Howard C.) '29.
- Queen, Greenville Burton, *a, w, sp*, Louisa, Ky. A.B. (Stanford U.) '29.
- Quine, Robert Corkill, *sp*, Greeba, Isle of Man, British Isles. S.B. (Wheaton College) '30.
- Rampona, Joseph Mercer, *s, a, w*, Youngstown, Ohio. M.E. (Cornell U.) '25.
- Rampona, Louis Edwards, *s, a, w*, Youngstown, Ohio. S.B. (Princeton U.) '28.
- Ramsaur, Jackson Townsend, *s, a, w*, Kings Mountain, N.C. A.B. (Duke U.) '29.
- Rich, Lillian Louisa, *a, w, sp*, Washington. A.B. (U. of Illinois) '28.
- Root, Donald Herbert, *s*, Milwaukee, Wis. A.B. (Dakota Wesleyan U.) '28.
- Rubenstein, Morris William, *w, sp*, Chicago. S.B. '30.
- Rupp, John Jerome, *a, w, sp*, Santa Barbara, Calif. A.B. (U. of Southern California) '29.
- Rushton, Joseph George, *sp*, Red Oak, Iowa. A.B. (Dartmouth C.) '31.
- Schulze, Hartwin Adolph, *sp*, Albany, N.Y. S.B. '29.
- Schumaker, Eugene, *w, sp*, Terre Haute, Ind. Sc.D. (Johns Hopkins U.) '30.
- Serbin, Aaron Frederick, *a, w, sp*, New York City, N.Y. S.B. (U. of Pittsburgh) '29.
- Smail, William Carlyle, *a, w, sp*, Fairmont, W.Va. A.B. (Fairmont State C.) '27; S.B. (West Virginia U.) '31.
- Smith, Paul Norton, *w, sp*, Fargo, N.D. S.B. (Georgetown U.) '29; S.M. (U. of North Dakota) '31.

- Snider, Silas Sinclair, *s, a*, Chicago. A.B. (Dartmouth C.) '29.
 Snow, Spencer, *s, a, w*, Salt Lake City, Utah. A.B. (U. of Utah) '28.
 Sorum, Frithjof Thorwald, *a, w, sp*, Canton, S.D. A.B. (St. Olaf C.) '25; S.B. (U. of South Dakota) '31.
 Staff, Henry, *s, a, w*, New York City, N.Y. A.B. (U. of North Dakota) '30; S.B. (*ibid.*) '31.
 Steckler, Carl, *a, w, sp*, Brooklyn, N.Y. S.B. (C. of City of N.Y.) '28.
 Stein, William, *s*, Brooklyn, N.Y. A.B. (U. of Alabama) '28.
 Stern, Robert Leo, *a, w, sp*, Los Angeles, Calif. S.B. '29.
 Stewart, Alice Hester, *s, a, w*, Frame, W. Va. S.B. (U. of West Virginia) '29.
 Stickney, James Minott, *a, w, sp*, La Grange. Ph.B. '29.
 Stimson, Harry Renner, *a, w, sp*, Gary, Ind. A.B. (U. of Indiana) '25.
 Syvertsen, Rolf Christian, *s*, Hanover, N.H. S.B. (Dartmouth C.) '18.
 Taylor, David, *s, a, w*, Chicago. S.B. (Iowa State C.) '23.
 Thompson, Roger Schaudt, *s, a, w*, Cogswell, N.D. A.B. (U. of North Dakota) '30; S.B. (*ibid.*) '31.
 Thrift, Chester Bird, *s, a, w, sp*, Oak Park. S.B. '29.
 Tobin, James William, *s, a, w*, Elgin. S.B. (U. of Notre Dame) '29.
 Tobin, Paul Gordon, *s*, Elgin. S.B. (U. of Notre Dame) '28.
 Torkelson, Oliver Eugene, *s, a, w, sp*, Bowman, N.D. A.B. (U. of North Dakota) '30.
 Trytten, Edwin Gerhardt, *s, a, w, sp*, Albert Lea, Minn. A.B. (Luther C.) '23; S.B. (U. of North Dakota) '31.
 Tucker, Margaret Emmeline, *a, w, sp*, Wutingfu, Shantung, China. A.B. (Oberlin C.) '29.
 Turner, Ewing Lee, *a, w, sp*, Springfield, Mo. A.B. (Drury C.) '27.
 Wales, Craig Clair, *a, w, sp*, Youngstown, Ohio. S.B. (Otterbein C.) '28.
 Warrick, George Wilks, *s, a, w*, Birmingham, Ala. A.B. (Howard C.) '29.
 Wiborg, Walter Norman, *s, a, w*, Chicago. S.B. '28.
 Wylie, Charles Redick, *s, a, w*, Los Angeles, Calif. A.B. (U. of Southern California) '30.
 Young, Henry Herman, *w, sp*, Dayton, Ohio. A.B. (U. of Illinois) '29.
 Zbitnoff, Nicholas, *s*, Blaine Lake, Sask., Canada. A.B. (U. of Saskatchewan) '24.
 Zekman, Theodore Nathan, *s, a, w*, Minneapolis, Minn. A.B. (U. of Minnesota) '29; S.B. (*ibid.*) '31.
 Zivitz, Nelson, *a, w, sp*, Jamaica, L.I., N.Y. A.B. (U. of Alabama) '29; S.B. (*ibid.*) '31.
 Zox, Maurice Levi, *s, a, w, sp*, Des Moines, Iowa. A.B. (U. of Wisconsin) '30.
 Zubatsky, David Jacob, *s, a, w, sp*, Milwaukee, Wis. A.B. (U. of Wisconsin) '31; A.M. (*ibid.*) '31.

SPECIAL STUDENTS REGISTERED IN THE MEDICAL SCHOOL,

1932-33

Alpert, Clarence Darrow	Madden, William Alfred
Blockson, Berget Henri	Maynard, William Alfred
Bowers, Ahern	McGoey, Joseph Paul
Capps, Frances	Muecke, Harold Wright
Cavaliere, Thomas Aquinas	Pankratz, David S.
Chiavetta, John	Parker, Jr., Edward Frost
Ferguson, Ralph S.	Penhale, Kenneth William
Frank, William P.	Perry, Solomon Paul

Garnett, Jr., John Wilson
Genge, Cole Deane
Herrmann, Carl Bernhard
Hollander, Joseph Lee
Holliday, Houghton
Johnson, Brantley Mettner
Kelly, Edwin H.
Kenny, Herbert Francis
Lawlah, John Wesley
Luke, Hing Biu
Madden, James Donald

Reid, Prentiss E.
Richter, Maurice Richard
Rockey, Victor Vernon
Scharf, Arthur Allan
Schneider, Maurice
Summers, James B.
Suttle, Robert Courtney
Svetanov, Vladimir Christov
Yakubowski, Joseph George
Zia, Khan

UNCLASSIFIED STUDENTS TAKING CLINICAL COURSES

A. JUNIORS

Balding, Bruce, *s*, Chicago.
Darnall, Fred, *s*, Chicago.
Demske, Casimir, *s*, Chicago.
Dickinson, Clyde Allan, *s*, Chicago.
Harris, James Frank, *s*, Chicago.
Havlik, John C., *s*, Chicago.
Karpas, Victor, *s, a*, Chicago.
Miller, Robert Frederick, *s*, Lima, Ohio.
Murphy, Iva Glene, *s*, Aurora.
Reed, William John, *s*, Peoria.
Roberts, Brockway, *s*, Chicago.

B. SENIORS

Chardkoff, Moses Austin, *s*, Tampa, Fla.
Plzak, Louis F., M.D., *w*, Chicago.

POST-GRADUATE STUDENTS

Bowers, Abern E., *a, w, sp*, Denver, Colo.
Brown, Samuel, *s*, Chicago.
Gavaris, George P., *s, a, w, sp*, Chicago.
Gilbreth, Glenn H., *a, sp*, Chicago.
Goldstein, Max, *w, sp*, San Francisco, Calif.
Hagood, Daniel, *s, a, w*, Brewton, Ala.
Hermann, Carl B., *a, w, sp*, Chicago.
Kenny, Herbert F., *s, a, w, sp*, Duluth, Minn.
Plummer, Frank V., *sp*, Chicago.
Scharf, Arthur A., *w, sp*, Chaplin, Sask., Canada.
Shurtleff, Raymond S., *w, sp*, Chicago.
Smedal, Erling A., *s*, Viroqua, Wis.
Thompson, John B., *s*, Chicago.
Weems, Mallory P., *s, a, w, sp*, Chicago.

SUMMARY OF ATTENDANCE IN THE MEDICAL SCHOOLS
FOR THE YEAR 1932-33

	Men	Women	Total
<i>On the Quadrangles</i>			
Students in preclinical courses, less duplicates...	163	16	179
Students in clinical courses.....	75	10	85
Special preclinical medical students.....	36	1	37
Total.....	274	27	301
<i>At Rush Medical College</i>			
Third year, less duplicates.....	133	9	142
Fourth year, less duplicates.....	187	14	201
Practitioners and unclassified students.....	12	1	13
Postgraduate students taking clinical courses....	14	0	14
Total.....	346	24	370
Total.....	620	51	671

